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New Orleans Medical

and

Surgical Journal

Vol. 89 February, 1937 No. 8

INAUGURAL ADDRESS

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NEW ORLEANS

Chaucer, in his quaint old English, tells us, "The greatest hunger of the human heart is approval of one's fellowmen." For a small spark of appreciation animals without reason perform in a manner pleasing and interesting to humankind. Our tailed atavistic ancestors ride bicycles, canines turn somersaults in the air, and the dumb seal will juggle a ball on its nose for a little encouragement. In an old scrapbook of my father, written forty years ago, I read,

"The love of praise, howe'er concealed by art
Is found and glows in every human heart.
The brave to seek it toils and toils endure;
The modest shun it and make it sure."

I remember so well an utterance by Charles Mayo, "A little taffy is worth tons of epitaphy." A garland of roses to the living is more than sumptuous wreaths to the dead. And, to crown this thought, I shall quote from the words of praise delivered to a group of Honor Students of Tulane University by that beloved and peerless leader, the father of surgery of the Southland, the most brilliant luminary in the constellation of the medical world, our own incomparable Doctor Rudolph Matas. "If you have a friend, tell him, for many a beautiful friendship, like a plant in a crowded corner, died for the want of sunshine on its leaves."

In all sincerity, I feel unworthy of this honor and far less deserving of the circumstances attending it, an occasion which takes first place in the cherished events of my life.

Distance lends enchantment. Recognition of merit usually comes from afar, in the form of tablets, medals, certificates to be hung on the walls or pinned on the lapel of one's coat, certifying to the truth of the old sayings, "No man is a prophet in his own country," "No man is a hero to his own valet."

But when it springs from your own associates with whom you have lived and labored for twenty-five years, when it is given in a community vibrant with the dreams of your own youth and early manhood, mellowed with the shadows of tender sorrows, enriched by ten thousand fond memories, when it is presented with no dissenting voice from esteemed and brilliant contemporaries in the noblest of the professions—the pen falls, words fold up, description is powerless—gratitude crystallizes and locks inarticulate a heart that is full to overflowing. Cicero calls gratitude the mother of the emotions. It is truly the memory of the heart.

The honor which I shall forever cherish no matter how long be my days, tells me not so much what I am as what I should be, and will have served its noble purpose if it spurs me to loftier deeds and greater achievements in the path outlined and directed by the worthy predecessors whose work I shall attempt to carry on, whose ideals I shall strive to emulate, whose wise counsel I shall diligently seek to obtain.

The policy of the incoming President, beginning the year 1937, would direct him to outline a program. However, he will not make promises but attempt to make good. An ounce of performance is worth a pound of preachment. If, at the end of this year, he shall have ac-

*Address delivered before the Orleans Parish Medical Society January 11, 1937, when inducted into position of President of this Society.

complished only a small part of that of his able predecessors another annual of progress will have been recorded in the history of the Orleans Parish Medical Society.

Above all, it shall be the aim of this administration to maintain and foster the fine feeling and beautiful harmony that ushered it into office. Medicine knows but one nation, the Nation of Mankind. It has but one common enemy, Disease. There should be no discord within our ranks; difference, yes, but not disagreements.

Perseverance, performance, progress and peace is my pledge. With the united support of the entire organization and surrounded by an executive board, in my humble opinion, second to none, I trust that the dwarf will see as far as the giant because he has the giant's shoulders to stand on.

A powerful lesson of unity is told in one of Aesop's fables. The father was on his deathbed and he called his fine, stalwart sons to his side. Taking from beneath his pillow a small bundle of sticks, held together by a bit of twine, he handed it to the firstborn and asked him to break it. As he failed, he handed it to each of the other boys who in turn failed likewise. Then removing the twine he broke the sticks into bits one by one. Turning to the boys he offered his advice, "My sons, as long as you stand together, nothing can do you harm, but once separated, you are at the mercy of your foes." Napoleon with his mighty Army intact was invincible, but with one marshall late he lost Waterloo. *"Divide et impera"*—the battle cry of the war lords of old—"Divide your enemies and conquer them." And again from the dusty leaves of Latin lore, *"Inimici ejus, domestici ejus,"* our greatest enemies can be within the home. Translating this thought into our latter day English, "United we stand, divided we fall."

Let us grapple our membership together with hoops of steel. Let us go forth united with one ideal and for one common cause: the ideal, to relieve, to comfort, to cure, to bring happiness; the common cause, suffering humanity.

Then come the wild weather,
Come sleet or come snow
We'll stand by each other,
However it blow.

And now, in closing, may I ask your kind indulgence as I sketch the character and voice the thoughts of a most grateful of grateful patients, endeared as no other to my heart, an unassuming man, one of Nature's noblemen, one of God's guardsmen. Though confined to a hospital room for more than six months, his frail human form wracked and twisted by constant cruel pains, there never passes a day that he does not give words of advice and comfort, his blessings and cheer to the numerous friends and penitents who seek him out. And withal in deep sincerity and with humble thanks, I have been told he offers this daily prayer, "Dear Lord, make me worthy of the esteem and confidence of my friends." May I make his words my own, and at the end of this term of office may I still be deemed worthy of the esteem and confidence of the splendid physicians who have elected me to the highest honor of their historic organization.

THE VACCINE TREATMENT OF ASTHMA IN CHILDHOOD*

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NEW ORLEANS

The vaccine treatment of bronchial asthma is no new therapeutic approach to the baffling problem of respiratory allergy. Twenty-one years ago Babcock[1] reported successful treatment of a case of asthma by the use of an autogenous vaccine. Again in 1919, Walker[2] pointed out the significance of vaccines in the treatment of bronchial asthma. Among later investigators who found the vaccine treatment of sufficient merit to publish the results of their work were Sicard[3], Hutcheson and Budd[4], L. Rogers[5], Wickett, Corley and Connell[6], Rackemann and Graham[7], Wherry[8], Dorst[9], Voorsanger and Firestone[10], Haibe[11],

*Read before the Louisiana State Medical Society, Lake Charles, April 27-29, 1936.

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Graeme Mitchell and M. L. Cooper[12], and Banks and Beasley[13].

Working on the theory that desensitization was attributable more to the non-specific protein factor in the vaccines than to any specific action of skin-reacting bacterial proteins, van Leeuwen[14] used tuberculin as a desensitizing agent in 300 cases of asthma after finding that most sufferers from allergic disease are hypersensitive to tuberculin. The results of his work, published in 1922, proved almost as satisfactory as the results obtained in the use of specific autogenous vaccines. He stated that "hypersensitiveness to a certain causative agent may be reduced also by the injection of small quantities of another allergen, provided the patient is hypersensitive to the latter allergen also."

Nelson and Porter[15] expanded the idea of non-specific protein therapy by the use of a simple animal protein broth in high dilution with 40 per cent complete inhibition of the spasm and 35 per cent marked improvement. However in their plan of desensitization, they found it necessary to continue weekly injections of the broth in high dilution in order to prevent allergic spasm, otherwise no fixed desensitization was obtainable.

The major portion of the reported work in the vaccine treatment of asthma is based on the observation of Walker[2] who in 1919 recognized two distinct types of asthmatic patients, "those in whom some foreign protein, either of the inhalant or ingested variety, initiated the attack, and a second type in whom the attack was aggravated or precipitated by a superimposed infection."

This latter method of infection is especially common in the infant or very young child. In the very young individual in whom upper respiratory tract and bronchial infections are frequent, there develops a gradually increasing amount of wheezing. Following two or three attacks of asthmatic bronchitis, the recurring attacks become more definitely paroxysmal and true bronchial asthma appears with its shrill spasmodic rales and pronounced dyspnea of variable duration. Likewise, one is continually impressed with the frequently obtained history of a protracted case of whooping cough having initiated asthma in a child with a definite allergic heredity in one or both lines of antecedents. Cooke[16] studied the influence of heredity on the age of onset and concluded that the more complete the allergic inheritance, the earlier the age of onset. He further discovered that of all children with bilateral allergic inheritance about 70 per cent will become allergic, while 50 per cent of all children with unilateral inheritance become allergic.

Reviewing the literature, the disclosure is made that several effective plans of specific or non-specific bacterial protein desensitization by intramuscular injection of autogenous or stock vaccines are pursued, all of which are reported almost equally effective. The earlier investigators were evidently impressed with the specific action of the vaccines used and autogenous vaccines were made from the predominating strain or strains of organisms cultured from the saliva of asthmatics. Walker[17] concluded that beneficial effects should not be expected in the majority of cases for more than one year because of the change of bacterial flora of the oral cavity each fall; therefore cultures were taken annually at this season and vaccines prepared from the predominating organism present.

Sicard[3], Hutcheson and Budd[4], Rogers[5], Wickett, Corley and Connell[8], Dorst and Wherry[9], Mitchell and Cooper[12], and Banks and Beasley[13] used specific autogenous vaccines, while Rackemann and Graham[7] and Voorsanger and Firestone[10] reported equally good results with either a specific autogenous vaccine or the non-specific stock vaccines.

The usual procedure in the preparation of autogenous vaccines made from the sputum consists of collection of fresh sputum in a sterile container, and the making of cultures on blood agar plates. From the first plates, second cultures are made from the predominating colonies and further growth obtained on the second plates. Then a tube of dextrose broth is inoculated from the second plate and growth continues for 24 hours. This is followed by washing of the growth

with salt solution containing a 0.5 per cent carbolic acid. Suspension of the vaccine in this carbonized saline and heating to 56° C. for one hour completes the preparation.

Vaccines are made from each of the several strains of predominating organisms and intradermal tests are made to determine sensitivity. After determining the strain or strains to which the patient is allergic, the specific vaccines are injected intramuscularly with special desensitization as the object.

Various plans of administration of the selected vaccine are used, some giving initial .065 c.c. doses and increasing gradually every two to four days until repeated 1 c.c. doses are administered intramuscularly. Others give larger doses at longer intervals, the average maximum dose being 1 c.c. except in the case of a recent report wherein the pertussis prophylactic vaccine of Sauer was used in increasing doses up to 3 c.c. in obstinate cases.

Recalling the impressive success obtained through the use of mixed pertussis vaccine in 1925 in the case of two children suffering with post-pertussis asthma, it was decided at the beginning of this study to employ the stock vaccine administration as a routine measure in the desensitization of this series of asthmatics.

The sixteen patients of the group include the routine asthma cases admitted in the pediatric service of the Hutchinson Memorial Clinic and three private cases which are included for completeness as regards home environment and intelligence of home care. There were seven females and nine males in the group. Ages varied from 14 months to 12 years. No type selection of intrinsic or extrinsic asthma was made, and patients were routinely administered the vaccine without attempting to discover a specific bacterial sensitivity by skin-testing. Invariably these patients had received previous treatment at some allergy or pediatric clinic, with no permanent response.

Attempts at discovering a foreign protein sensitivity were employed in the history-taking and any article of diet or contact protein which could be fixed in the etiology was removed.

Physical examination included a search for any possible focal infection, attention being paid to presence of tonsils and adenoids and their condition, appearance of the pharyngeal wall, and presence of any alveolar abscesses or dental caries. Attention was directed toward any endocrine dysfunction, and basal metabolic rates were determined in any questionable thyroid symptom-complexes. Routine roentgen rays of the chest were made in all cases and sinuses were roentgen rayed in the older children. Routine urinalyses to exclude chronic pyelitis, and blood counts to exclude acute inflammatory reactions were made. Tonsillectomies were performed whenever repeated colds and the persistence of cervical adenopathy justified an impression of chronic toxic absorption from the tonsils, or when obstructive signs, mouth-breathing and snoring, were present. In regard to sinusitis, Weille[18] found 80 per cent of his asthmatic patients showing some degree of sinusitis, and 75 per cent of these patients with an intrinsic asthma showed beneficial response to nasal surgery. The intradermal Mantoux test was done routinely.

The use of intradermal allergy tests or skin scratch testing was abandoned largely because of unsatisfactory final readings obtainable, some tests being found positive when the patient showed no clinical sensitivity, and again some patients showing such a complete generalized sensitivity to every allergen tested that every known source of protein in diet or environment would of necessity be excluded. Patients have also been seen who in spite of a known clinical allergy to a specific foreign protein are found to be negative on skin-testing. In this connection Rowe[21] of Oakland found food allergy existing in at least 50 per cent of his food-sensitive patients without skin reactions. Peshkin[20] reports a 10 per cent error in skin-testing.

Patients were put on a low histidin diet after the recommendation of Eustis[19] in a much earlier investigation, and the diet of each patient was further restricted to meet

any special indication in the individual case. Elimination was effected with free use of saline laxatives whenever necessary.

Calcium in the form of calcium gluconate dissolved in orange juice was given by mouth in a 24-hour dosage of 45 grains, with an increase to 60 grains daily in the presence of wheezing. The only other routine medication was ten drops of syrup of ferrous iodide three times daily to maintain a constant iron intake.

The two forms of stock vaccine used were mixed pertussis vaccine, used in fourteen of the cases, and mixed catarrhalis vaccine used in the remaining two cases.

(V-832) Lilly		
B. pertussis	4,000	million
B. influenzae	200	million
Streptococci	100	million
Pneumococci	200	million
M. catarrhalis	100	million
Staphyl. aureus	400	million
Staphyl. albus	100	million
	5,100	million

Bio. 625 P. D. & Co.		
B. pertussis	4,000	million
Staphyl. aureus	500	million
Strept. hemo. & non-hemo.	100	million
Micrococcus cat.	40	million
Infl. bac. (Pfeiffer)	160	million
Pneumoc. types 1,2,3,4.	200	million
	5,000	million

Bio. 614 P. D. & Co.		
B. Friedlander	50	million
Pneumo. (4 types)	100	million
Micr. catarrh.	50	million
Strept. hemo & non-hemo	100	million
Staphyl. albus	350	million
Staphyl. aureus	350	million
Pseudo-diph. B.	100	million
B. infl. (Pfeiffer)	100	million
	1,200	million

An initial dose of 0.3 c.c. of the vaccine was given intramuscularly, followed by 0.65 c.c. dose at the end of 48 hours. After these two smaller doses, three doses of 1 c. c. each were given at 48-hour intervals followed by three 1 c. c. doses at weekly intervals. Local reactions in the form of a large wheal of erythema and some sensitiveness on passive manipulation were frequently encountered and usually implied effective desenitization. Constitutional reaction in the form of temperature elevation was encountered in two cases, one of whom was permanently relieved of her asthma, and the other showed definite improvement.

The presence of sonorous and sibilant rales per se was not deemed a contraindication to administration of the vaccine, but the presence of any suggestion of dyspnea or hyperpnea was regarded a definite contraindication. As soon an any evidence of this sign appeared, adrenalin chloride 1:1000 was administered by needle. Oddly enough one mother presented her baby of 16 months at the clinic in the full throes of an asthmatic dyspnea requesting a fellow staff-member that the vaccine be given in my absence. The request was granted and beneficial response within 30 minutes was much more complete than in the case of adrenalin or ephedrine administration in previous seizures. However this experience did not cause any changing of our plan of withholding the vaccine in the presence of dyspnea.

Following the initial course of vaccine administration the mothers were advised to bring their children to the clinic for further vaccine administration at the initial stages of any upper respiratory infection, i. e. at the onset of sneezing and a watery nasal discharge. At their reappearance at the clinic 1 c. c. of the vaccine was given and followed in 48 hours by a second dose. Occasionally wheezing developed in spite of the treatment, and a third dose was given with impunity in the absence of dyspnea.

	Number of Cases	Vaccine	Cured	Impr.	Unimpr.
Sicard	16	Autogenous and Stock	75%	———	———
Hutcheson & Budd	40	Autogenous	60%	25%	15%
L. Rogers	40	Autogenous	52%	———	———
Wickett, Corley, Carroll	13	Autogenous	76%	———	———
	90	Autogenous	53%	———	———
Rackemann & Graham	41	Stock	68%	———	———
Voorsanger & Firestone	22	Stock	32%	36%	32%
	150	Autogenous	40%	20%	40%
I. C. Walker	28	Stock	75%	21%	4%
Banks & Beasley	143	Autogenous	80%	———	20%
Author's Series	16	Stock	68%	18%	14%
	472	Autogenous	62%	22%	16%
Total	107	Stock	60%	24%	16%

Comparative results of use of autogenous and mixed vaccines.

CASE REPORTS

R. S. was seen first November 23, 1934 at the age of 8 years. Previously had had chicken pox, measles and pneumonia. Patient had had no previous allergic manifestations and no known food sensitivity. Tonsils plus 2; Mantoux test was not made. Child had had asthma for one year and had upper respiratory infection on December 3, 1934 and January 18, 1935. The mixed pertussis vaccine was used, giving 0.3 c.c., 0.65 c.c. and then 1 c.c. for 8 further doses. The patient was apparently cured. Condition was post-pneumonic.

M. T. F., a patient 9 years of age, was seen first on February 18, 1935. Previously had had chicken pox and frequent colds. Previous allergic manifestations were croup since infancy and hives at 7 years of age. The tonsils had been removed. Had had asthma for 2 months. Mixed pertussis vaccine was used giving usual amount in 10 doses. The patient was apparently cured.

A. P. B., a patient 8 years of age, seen first on October 14, 1935, had had previously measles, mumps and frequent colds and a severe case of whooping cough at age of 3 years. No previous allergic manifestations. Tonsils had been removed. No food sensitivity; Mantoux test made October 16, 1935 was found to be negative. Had had asthma 4 years. Acute rhinitis November 6, 1935. Mixed pertussis vaccine used in treatment; following usual procedure, giving 6 doses. This patient was cured.

J. J. K., 4 years of age, seen first on February 13, 1935. Had had measles, diphtheria, and pneumonia and had suffered from attacks of croup since age of 1 year. Tonsils plus 1, slight inflammation, no cervical adenopathy. No known food sensitivity; Mantoux test made February 15, 1935 was negative. He had asthma for 2 years. Roentgen ray of lungs showed hilar shadows slightly enlarged, parenchyma lung negative for tuberculosis. Acute rhinitis January 6, 1936. Mixed pertussis vaccine used in treatment; giving 4 doses. Patient was apparently cured. Condition post-pneumonic.

S. M. B., 7 years of age, was seen first on October 15, 1934. Previous infections: measles, chicken pox and pneumonia. Patient had had no previous allergic manifestations and no known food sensitivity. Tonsils were removed at age of 3½ years. Mantoux test was made February 15, 1934 and found to be positive. Patient had had asthma for 6 years. Roentgen ray examination of lungs showed suggestive hilar tuberculosis. Intercurrent upper respiratory infection showed: on November 26, 1934, slight wheezing, no dyspnea; January 4, 1935, acute coryza, no whooping or dyspnea; February 12, 1936 acute coryza, no whooping or dyspnea. Mixed pertussis vaccine used in treatment patient being given in usual way a total of 28 doses. Patient apparently cured. Condition post-pneumonic.

L. M. was first seen December 6, 1933 at 6 years of age. Maternal grand-mother and great-grandmother had had asthma. Child had had measles and mumps and severe case of whooping cough at age of 2 years and also had had croup. Tonsils were removed September 5, 1933. There was no known food sensitivity. Mantoux test made on November 14, 1934 was found to be negative. Child had had asthma for 3 years. Roentgen ray examination of lungs showed interlobar pleura thickened on right and hilar lymph gland enlargement but negative for parenchyma tuberculosis. Intercurrent upper respiratory infection showed: on

April 30, 1934, February 15, 1934 and April 28, 1935, slight wheezing, no dyspnea. Treatment was instituted by giving mixed pertussis vaccine in usual way in 28 doses. Patient was cured. Condition was post-pertussis.

M. G., a patient 9 years of age, was seen first on October 28, 1935. Had previously had measles, mumps, frequent colds and whooping cough when 3 years of age. Tonsils had been removed. There was no known food sensitivity or previous allergic manifestations. Mantoux test was found to be negative. Had had asthma for 4 years. Roentgen ray of lungs showed slight thickening lower right bronchial region. Attack of acute rhinitis November 15, 1935. Mixed pertussis vaccine was used in treatment, following usual method, giving 5 doses. Patient was cured.

S. J. F. was first seen January 25, 1935; 14 months old. Maternal grand-father had had asthma. There were no previous infections, but whooping cough developed on April 9, 1936. Patient had had eczema since third day of life and had had asthma 13 months. Child had food sensitivity to cow's milk, egg white and egg yolk. Mantoux test on October 16, 1935 was negative. Tonsils normal in size and appearance. Roentgen ray of lungs showed enlargement of thymus on January 25, 1935. On April 10, 1936 thymus and lungs were negative. This child had had acute rhinitis with frank asthmatic seizure on October 9, 1935. Given mixed pertussis vaccine in usual way in 21 doses. The response to treatment was "improved". This child had thymic syndrome in infancy and now averages one asthmatic attack every 6 to 12 weeks, when previous to treatment it had averaged every 2 weeks.

W. J. G., 7 years of age, was first seen December 16, 1935. Had had no previous infection except whooping cough at age of 4 years. No previous allergic manifestation or known food sensitivity. Tonsils were small, atrophic and submerged. Mantoux test made on December 18, 1935 proved to be negative. Had had asthma for 3 years. Roentgen ray of lungs showed parenchyma negative but an old interlobar pleurisy. Intercurrent upper respiratory infection: on December 27, 1935 showed wheezing 12 hours, no dyspnea and on March 25, 1936 acute coryza. This patient was treated with mixed pertussis vaccine given in usual method in 9 doses. Patient was cured. Condition post-pertussis.

D. R. G., was first seen April 27, 1934 at 8 years of age. Previously had had chicken pox, measles and mumps, eczema for 3 years and croup. Tonsils were plus 1. There was no known food sensitivity. Patient had had asthma for 3 years. Doctor treated child with mixed pertussis, the usual amount being given for 4 doses, when patient deserted in an unimproved condition after being under observation for 5 weeks.

B. L. L., 8 years of age, was seen first on April 24, 1935. Maternal grand-mother had had asthma and hay-fever. Child had had chicken pox, frequent colds and measles and had suffered from croup with vomiting. Tonsils were small, atrophic and submerged, cervical adenopathy plus 1. There was no known food sensitivity. Mantoux test was made and found to be negative. Child had had asthma for 5 years. Intercurrent upper respiratory infection occurred on October 1, 1935, October 21, 1935 and January 6, 1936, acute rhinitis. This patient was treated with mixed pertussis vaccine, 0.3 c. c.; 0.5; 0.65 and 1 c. c. in 11 doses, and was cured.

J. G. T. was first seen February 18, 1933 at 7 years of age. Had previously had pneumonia, mumps, measles and croup. In January, 1936 had whooping cough with bronchopneumonia. Tonsils had been removed. There was no known food sensitivity. Mantoux test proved to be negative. Child had had asthma 4 years when first seen by doctor. Mixed catarrhal vaccine was used, patient being given 0.25; 0.4; 0.5; 0.75; then 1 c.c., 20 doses in all. Patient was cured. Developed pertussis in January 1936 with bronchopneumonia, however there were no further asthmatic evidences.

J. L., aged 6 years, was first seen January 7, 1934. Child had previously had measles and severe case of whooping cough at age of 4 months. Tonsils were spongy and congested; R plus 2 and L plus 1. There was no known food sensitivity or previous allergic manifestations. Mantoux test was negative. Child had had asthma 10 months and was treated with mixed catarrhal vaccine. Patient was cured.

R. F. K., a 10 year old patient, whose paternal aunt and grandfather had had asthma was first seen on October 11, 1935. Child had previously had measles and a mild case of whooping cough as well as eczema in infancy and hay-fever at the age of 3 years. Tonsils were plus 2. Child showed a food sensitivity to cow's milk, egg white and egg yolk. Mantoux test made on March 23, 1936 was found to be negative. Patient had had asthma for 8 years. Roentgen ray of lungs showed bilateral enlargement tracheo-bronchial nodes, parenchyma negative for tuberculosis. Was given 16 doses of mixed pertussis vaccine in the usual fashion. This child improved. Has had two frank asthmatic seizures since first seen, however had previously had attacks approximately every 2 or 3 weeks.

P. J. C., a patient 2 years of age, was first seen June 28, 1935. Mother, maternal grandmother and great grandmother had had asthma and eczema. Child had had pneumonia and measles and at age of 9 months had had whooping cough. At the age of

1 year had case of hives and had suffered with asthma for 6 weeks. Tonsils were plus 3 with cervical adenopathy. There was no known food sensitivity and Mantoux test made July 3, 1935 was negative. Child was given 16 doses of mixed pertussis vaccine in usual manner and improved. Condition was post-pneumonic. On October 16, 1935 child had frank asthmatic seizure which was the only attack since beginning of treatment.

C. B., a child 12 years of age, was seen first on November 10, 1933. Two maternal aunts have been victims of asthma. Child had measles and chicken pox and a severe case of whooping cough at the age of 2 years. Tonsils were removed when patient was 5 years of age. There was no previous allergic manifestations or known food sensitivity. Mantoux tests were made on November 6, 1934 and March 13, 1935 and both were found to be negative. Child had had asthma for 9 years. Roentgen ray examination of lungs showed glandular structure at hilum enlarged, parenchyma negative for tuberculosis. Mixed pertussis vaccine was given, in the usual way in 21 doses. Child did not improve; condition was post-pertussis. This patient had chronic asthma of 9 years' duration. During 2 year observation lungs were free from rales only at long intervals for 2 or 3 days. Dyspnea was frequent and severe.

SUMMARY

Realizing a lack of completely favorable results in the plan of protein desensitization by injection of specific skin reacting allergens, a plan of non-specific bacterial protein desensitization was used as a routine therapeutic procedure in a series of asthmatic children.

Because of possible confusion in the interpretation of skin-scratch test readings, it was felt that the results obtained did not justify the discomfort suffered by the patient, and allergen skin-scratch testing was not used.

Sixteen cases of bronchial asthma in children of both sexes ranging from 14 months to 12 years were given intramuscular doses of stock mixed pertussis and mixed catarrhalis vaccine for non-specific protein desensitization.

The plan of administration of the vaccine entailed the giving of 1/3 c.c and 2/3 c.c. doses forty-eight hours apart followed by three 1 c. c. doses at forty-eight hour intervals and three 1 c. c. doses at weekly intervals. Presence of dyspnea was regarded as the only contraindication to the administration of the vaccine.

The results of the treatment showed 68 per cent complete inhibition of allergic spasm, and 18 per cent improvement of the condition both in recurrence and severity of seizures; 14 per cent showed no response whatever to treatment.

Upwards of 75 per cent of the Mantoux tests were negative, showing a low incidence of tuberculosis in the asthmatic child.

CONCLUSIONS

Non-specific bacterial protein desensitization is a valuable adjunct in the routine treatment of asthmatic children.

The action of the stock vaccine used is non-specific and favorable results may be obtained in both the extrinsic and intrinsic types of asthma.

It is impossible to state in advance which individual is going to benefit by the vaccine treatment.

One can not declare a patient permanently cured of asthma, because of the multiplicity of allergic reaction, and the possibility of a recurrence in its old or a new form after years of complete freedom from allergic spasm.

One of the most gratifying results of this plan of treatment is the high percentage of freedom from dyspnea obtained, and if this alone can be promised in any plan of treatment, it certainly justifies continued repetition of the vaccine administration.

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DISCUSSION

Dr. Allan Eustis (New Orleans): I want to ask Dr. Naef if he took roentgen rays of these childrens' chests. A vast majority have evidence of mediastinal involvement of glands which accounts for the frequency with which functional asthma follows. In connection with this, I do not know whether you can see it with children, but in adults the chronic adenitis in these cases is very interesting. I use diathermy through the mediastinal glands. I have had patients with constant coughing, relieved after five or six applications of diathermy, and in those few cases controlled with roentgen ray examinations there is definite evidence of improvement in diminution in the shadow of the hilum. Diathermy used in complicating mediastinal adenitis is an excellent thing.

Dr. Harris Hosen (Port Arthur, Texas): Before treating asthma by any routine method it is necessary to differentiate between the various etiologic types. The two main types are the exogenous and endogenous; the former deals with pollens, foods, dust, the latter deals with infection. In exogenous asthma an attack is precipitated when the patient comes in contact with some element to which he is sensitive. The epithelium of the respiratory tract throws out secretions which diminishes the size of the air passages in the lungs, thus giving the mechanical symptoms of asthma. Microscopic examination of these secretions show a preponderence of eosinophiles, thus establishing the diagnosis. In the endogenous type there is usually an infection in the body, almost invariably of the upper respiratory tract, due to organisms to which the patient has become sensitive. But sometimes, and probably often, an attack of asthma of this type is merely due to a descending infection originating from an upper respiratory infection. The descending infection causes an irritation of the lining of the lungs which throws out secretions, thus diminishing the size of the air passages. This mechanism gives the symptoms of asthma. This type of asthma invariably follows an acute flare-up of the original focus, usually manifested by the presence of a cold a day or two before the asthma begins. An examination of the secretions of this type shows a preponderence of neutrophiles and few or no eosinophiles. By such microscopic examination we can differentiate between the two types of asthma which should be treated accordingly. From the results mentioned in Dr. Naef's paper, I will have to concede that his cases were probably of the infectious type, but I want to emphasize the necessity of removing the source of infection as being the most important phase of treatment. Vaccine therapy which has its important place will never give permanent results as long as the focus is not removed. The foci stressed in this series of cases appeared to be the lungs which were reported as having enlarged hilar glands. Such findings, I feel are rarely if ever the primary source of infection. Whenever the lung shows evidence of chronic infection, nontuberculous in origin, one can be assured that in the vast majority of cases there will be a concomitant sinus infection. Treatment of the lung in the face of such a condition is worthless. Removal of the sinus condition automatically gives a cure to the lung pathology unless bronchiectasis has already developed. I can make this statement for in my own investigation of this subject I took routine roentgen rays of the lungs and sinuses and found that 98 per cent in a series of 100 cases with chronic bronchitis had a sinusitis. Treatment of the sinusitis invariably relieved the symptomatology present. Therefore in our bacterial asthmas drainage, plus vaccine therapy will give results of a permanent nature. But, if the sinus condition is not treated accordingly, vaccine therapy cannot possibly give pleasing results unless the sinusitis is of a short duration, in which case vaccine therapy alone will often clear up the condition.

Sinusitis is often present in cases that are nonbacterial but due to pollens, or food, but this sinusitis is not of an infectious type. Cameron of Glascow, Scotland, has shown in a remarkable work that infectious sinusitis is very infrequent in true asthmas, but a thickened membrane often occurs in both hay-fever and asthma. A study of antral washings will differentiate between the two types of sinusitis. For example I take my own case; I had hay-fever for several years due to sensitivity to various grasses. I had three years of specific treatment by Dr. Efron of New Orleans, with the result that I have been free of hay-fever for the past two years. Roentgen rays show thickened membranes yet I have never had a single symptom of infectious sinusitis. In the last two years I have had only one cold.

In conclusion I want to stress the necessity of

differentiating between the infectious and non-infectious asthma and the necessity of removing the focus of infection, which almost invariably is in the sinuses. Vaccine therapy is necessary but is secondary to the removal of the sinus infection.

Dr. Emile Naef (In conclusion): Dr. Hosen amplified my statement to the effect that we have to remove all sources of infection before we may expect to get any effect from vaccines. In the light of our present knowledge, we do not know where immunity ends and allergy begins and until we remove all sources of chronic infection, the vaccine treatment is not going to be effective.

The presence of tracheobronchial adenopathy, as described by Dr. Eustis, was investigated by roentgen ray and more than 75 per cent of the series showed some degree of adenitis. This mediastinal adenitis was proved to be non-tuberculous by the Mantoux test in all but one patient, the hypertrophy of the glands, therefore, being most often a residual of focal infection in the upper respiratory tract.

Roentgen ray is of definite value in allaying the severe reflex cough through shrinkage of these glands, but I am not impressed with any permanent effects on the patient's allergy being derived directly from the roentgen ray.

A CLINICAL STORY OF NEPHRITIS IN CHILDHOOD*

JULIAN GRAUBARTH, M. D.†
NEW ORLEANS

The subject of nephritis in childhood has undergone many changes and much confusion has resulted. These changes are due chiefly to a better understanding of the nature of nephritis of childhood and also to the realization that nephritis of childhood is different from nephritis seen in adults. The child reacts to disease entirely differently from the adult, because he is a growing individual and his cardiovascular system has not been attacked by the chronic diseases. As a result, therefore, we see nephritis in its pure form.

What is proposed in this paper is a purely clinical approach to the subject. It will include a classification of nephritis in childhood, a brief discussion of each variety, a discussion of the more common diagnostic aids and their interpretation, and also an outline of the treatment of nephritis in childhood, including a discussion of the treatment of the cerebral manifestations with convulsions or, as it is some times spoken of, uremia.

The classification of nephritis in childhood has been variously proposed by different writers, but they are essentially the same. The classifications of Volhaard and Fahr, and of Addis are used herein as a basis. Their classification is hemorrhagic Bright's disease or glomerulonephritis, degenerative Bright's disease or nephrosis, arteriosclerotic Bright's disease or nephrosclerosis. The finding of albumin in the urine is often erroneously diagnosed as nephritis. It must always be kept in mind that albumin may be found in perfectly healthy children. It may appear after exercise, overeating, exposure to cold, in rapidly growing children, during adolescense, or in the condition known as orthostatic albuminuria. Albumin is often seen following febrile states, in which instance it is undoubtedly due to cloudy swelling of the kidney and it clears up soon after convalescence. Also it must not be forgotten that albumin is seen in the urine when pus cells and red cells are present.

The varieties of true nephritis may be classified as follows:

1. (a) Acute hemorrhagic Bright's disease (Addis).
   (b) Acute post-infectious nephritis (Aldrich).
   (c) Acute glomerulonephritis (Volhaard and Fahr).
   (d) Acute hemorrhagic nephritis.
2. (a) Parenchymatous.
   (b) Tubular.
   (c) Nephrosis (Volhaard and Fahr).
3. (a) Degenerative Bright's disease (Addis).
   (b) Arteriosclerotic nephritis.
   (c) Nephrosclerosis (Volhaard and Fahr).
   (d) Chronic interstitial nephritis.
   (e) Renal rickets or renal infantilism.

A brief description of acute glomerulone-

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*Read before the Section on Pediatrics, Louisiana State Medical Society, Wednesday, April 29, 1936, Lake Charles, Louisiana.

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phritis or the various synonyms given under 1, is as follows:

The kidney is somewhat enlarged and the glomeruli stand out distinctly as fine red points. Practically all the glomeruli are involved. The tubules are secondarily involved as they are dependant on their blood supply from the glomeruli.

The condition occurs equally in both sexes and is rare in infancy, because infants are less liable to suffer from the conditions likely to cause it. However, when it occurs in infancy, syphilis is the prominent etiologic factor. All recent clinical investigations have gone to show that infections, either of the acute specific nature or from local foci, are the chief cause of nephritis. Cold and exposure, if they play any part, are merely excitants. The infections are chiefly of the streptococcal diseases of the nasopharynx, ear, and upper respiratory passages. Acute tonsillitis, otitis media, and scarlet fever are the outstanding examples. There have been a few cases traced to the pneumococcus, the diphtheria bacillus, and the staphylococcus. In a series of 214 cases collected by Hill and others, there were 66 instances of acute tonsillitis and 25 of scarlet fever, preceding the illness. The form of nephritis known as the focal embolic glomerulonephritis of Loblein must be excluded as the lesion is due to plugging of the capillary loops by emboli from bacterial endocarditis of the streptococcal viridans type. Sepsis, extensive skin lesions, and certain drugs (carbolic) are all causes of a select few of the cases.

The patient is taken acutely ill with malaise, anorexia, fever, and sore throat. He recovers and is up and about, and the mother notices a bloody urine and puffiness about the eyes. Occasionally the onset may be more stormy. Following a period of recovery from an acute infection, the patient complains of headache and visual disturbances. The symptoms continue with vomiting, and suddenly convulsions supervene. Hematuria may or may not be noticed previously. The urine in acute glomerulonephritis is smoky, due to presence of blood. Red blood cells are seen microscopically for days after the gross evidence of the blood has disappeared. All forms of casts, red and white blood corpuscles are also present. The volume of output is decreased at times to the extent of anuria. The dye test may be normal or diminished from 25 to 40 per cent in two hours. Cultures are sterile. Accumulations of nitrogenous products in the blood are found in acute glomerular nephritis.

When edema is present in acute glomerular nephritis, it is of the non-pitting type, and the tissues are tense in contrast to the soft-pitting edema in the tubular form. The brain in both types is increased in size; the brain in tubular nephritis is soft and boggy, while the brain in the glomerular type is tense and hard.

Blood pressure is increased in glomerular and decreased or normal in tubular nephritis. To determine normal blood pressure in children, multiply the age in years by two and add 80.

The cause of the arterial hypertension, according to Marriott, is due to a general capillary constriction, and uremia is due not to renal insufficiency, but to a toxin. Blackfan feels that cerebral symptoms are due to edema of the brain and hypertension is the result. The therapeutic results with magnesium sulphate are brought about by a lessening of the edema, which in turn lowers the pressure. This fact helps to substantiate Blackfan's theory.

Some authors refer to tubular nephritis as nephrosis (Volhaard and Fahr), while others call it parenchymatous nephritis. Nephrosis is perhaps the better term.

The kidney of this variety is large in size, and there is loss of normal striations, presence of edema, and pallor. A degenerative lesion is the characteristic feature. The proximal and distal convoluted tubules are the seat of diffuse lipoid formations. The glomeruli are slightly if at all involved. Slight fibrosis and lymphocytic infiltration may be found in places.

The etiologic factor is difficult to establish. The disease is rare in infancy and relatively common in early childhood. The exact cause is unknown, but evidence has been brought forward to suggest that it may be some toxin of bacterial origin circulating in the blood. Marriott believes it is due to a staphylococcal infection, the seat of which is the middle ear and paranasal sinuses. It is believed that in some cases the toxins of the pneumococci, syphilis,

diphtheria, and inorganic poisons may be the cause. Some authors feel that the changes are extra-renal in origin. Alteration of lipoid metabolism was given as the primary factor, or by some general metabolic disturbances of the thyroid gland. Nephrosis should then be considered a general systemic disease.

The onset is quite characteristic, a child who is previously healthy is noticed having a "puffy" appearance about the eyes and to have swollen ankles. During intervals of no edema, the patient appears well and playful, except for a mild secondary anemia. However, when the edema is extreme they may appear drowsy and uncomfortable. Alarming symptoms, such as convulsions and visual disturbances, are rarely seen. Fever may or may not be present. Edema begins in the face and spreads to all of the subcutaneous tissues so that finally the entire body is swollen and the patient presents an appearance of abject misery. Fluid may be found in the thoracic, pericardial, or peritoneal cavities. Often times when an acute infection occurs, the edema lessens to a marked degree. The explanation for this is ascribed to protein shock. High fever has been induced as a form of therapy to get rid of edema.

In tubular nephritis the urine shows: (1) reduction in amount, (2) high specific gravity, (3) albumin in large amounts, (4) urinary protein as serum albumin, (5) poor in chlorides, (6) casts, (7) doubly refractile lipoid bodies, (8) leukocytes, (9) sterile urine and (10) dye tests normal.

The blood findings are: (1) blood protein reduced with a reversal of albumin-globulin fraction, that is, the globulin fraction exceeds the albumin fraction; (2) globulin and fibrigen increased; (3) increase of lipoids of the blood, cholesterol is five times the normal; (4) non-protein nitrogen not increased; (5) sugar at a low level. The blood pressure is low.

The mortality is about fifty per cent. The disease fluctuates and intercurrent infections are very serious and should be viewed with alarm. Strepto and pneumococcus peritonitis are not infrequently seen as complications.

Chronic interstitial nephritis is seen in childhood and is similar to the so-called nephrosclerosis seen in adults. Chronic interstitial nephritis is in reality a descripton of an end-result rather than of a clinical entity. The underlying cause of this condition, therefore, is varied. Children have been born with a nephritis, the so-called intra-uterine nephritis. These little patients get along for a while, then later in childhood develop the classical picture of nephrosclerosis. This is explained, perhaps, by the fact that the damaged kidneys have enough functional tissue left, but as time goes on it is attacked by the circulating toxins and bacteria, which cause a retention of waste products, and finally the syndrome of nephrosclerosis. Then too, the normal kidney may be repeatedly attacked by a streptococcic infection, and eventually pass from the acute to the chronic variety. Alcohol, lead, and other poisons rarely affect the child, so they can be eliminated as a causal agent. Then again, nephrosclerosis is often associated with some congenital defect of the kidneys, such as hydronephrosis, and obstructions in other parts of the genito-urinary tract. Also, calculi may cause enough damage of the kidney to make it vulnerable later to the toxins. Syphilis is often an etiologic factor. Inheritance plays an important role. These patients inherit a predisposition to hypertension and kidney disease of the nephrosclerotic variety. Nephrosclerosis is often associated with bone changes and stunted growth, and is called renal rickets, renal infantilism, and renal dwarfism. By x-ray and histologic study, these changes appear somewhat different from those found in infantile rickets, the shafts of the long bones and the flat bones have greater translucency and a more spongy appearance than is usually seen in ordinary rickets. Mitchell's description of nephrosclerosis is excellent, and I quote directly from him:

"The symptoms and examination of children with nephrosclerosis may be summarized as follows:

"There is no difference in sex incidence; the average age at the onset of symptoms is about seven years, but many patients have symptoms in early infancy; marked retardation of growth is present in almost all patients; mentality may be normal or above the average, but in some patients it is less than the average for age; sexual development is frequently retarded in

the patients past the usual age of puberty; polyuria and polydipsia are frequent and early symptoms; anorexia may be a marked symptom; headache and vomiting occur frequently; convulsions, uremic in nature, are sometimes early and often terminal symptoms; tetany is an infrequent symptom; edema, usually slight, is not a frequent symptom; hemorrhagic manifestations may be present; albuminuric retinitis is frequent; anemia is very constant; pigmentation of the skin is not uncommon; circulatory disturbance is surprisingly infrequent; cardiac enlargement is common; sclerosis of the superficial blood vessels may be present; high blood pressure is frequently found when examination is made for it; on examination of the urine low specific gravity and albumin are always found and, less frequently, casts and white and red blood cells; when kidney function tests are made there is usually discovered a marked renal insufficiency; genu valgum is a frequent manifestation in those patients who have bone changes.

"The prognosis of nephrosclerosis in childhood is naturally serious. In a series of approximately two hundred patients under twenty years of age, 50 were alive at the time their cases were reported; of 129 in whom the age at death was given, the average age was nine years and nine and a half months."

The incidence of nephritis, according to Blackfan's series of 46 cases, was found to occur as follows: 24 of the acute glomerular variety; 14 of the acute tubular variety; 5 of the chronic variety, and three of the mixed variety. The incidence is about the same for several other series studied by other men.

The laboratory findings offering the most valuable information are the Addis count, the phenolsulphonephthalein dye test, the urine concentration tests, and blood chemistry.

The sediment counts, according to Addis's technic, are a valuable aid. His counts are made on urine that is collected from individuals whose fluids are restricted for 24 hours. The 12 hour night specimen is measured and if acid in reaction, a measured portion is centrifuged. The sediment is suspended in salt solution and the formed elements are counted in a hemocytometer. In the normal individual Addis found:

	Range	Average in 12 hours
Red corpuscles	0— 425,000	65,000
Casts	0— 4,270	1,040
Leukocytes and epithelial cells	32,400—1,000,000	322,550
Protein	10—30 mg.	

An increased count indicates some abnormality of the kidneys or urinary tract.

The renal function tests are not so valuable in the diagnosis as in the prognosis of nephritis. Other conditions essentially non-nephritic in nature, such as anhydremia, intestinal obstruction, and febrile states, may cause a temporary loss of the functional capacity of the kidney. All this should be kept in mind when interpreting the results.

The urine concentration test, done according to Hill's modification of Mosenthal's technic is as follows: The child is given a full diet with high protein foods. A capsule containing 15 grains of salt and a tablet of 2 grains of caffein-sodium benzoate is given with each meal. Also 10 ounces of fluid is given with each, but no fluids between meals. The urine is collected every two hours from 7 a. m. to 7 p. m., and the specific gravity of each specimen is recorded. The interpretation is a variation of from 8 to 10 points in the normal. When the variation is from 1 to 2 points, the kidneys may be considered damaged.

The phenolsulphonephthalein test: The technic is the same as in adults, except one-half of the dye is injected either intramuscularly or intravenously. The interpretation of the values are the same as in adults. Following the intramuscular injection, the excretion of 40 to 60 per cent of the dye at the end of the first hour is normal. While following the intravenous route 65 to 85 per cent is considered normal. In the interpretation it must be remembered that 50 per cent of the kidney function may be impaired before diminished dye excretion occurs. Values of 30 to 40 per cent in two hours indicate moderate impairment, while 20 per cent means serious impairment, and less than 10 per cent very serious impairment.

The interpretation of the blood chemistry is important. When the urea nitrogen rises to 30 or 40 mg. per 100 c.c. (normal 12-20) the uric acid to 6 or 8 (normal 1-4), it means moderate impairment of renal function. Values of 80 to 100 for urea nitrogen and uric acid 12 to 15, are indicative of serious damage. Creatinin rising to 4 mg. per 100 c.c. (normal 1 to 2) is a serious prognostic sign and when it rises to 8 to 10 c.c., it is always indicative of fatal outcome. Chlorides increase when edema is present (normal value 500 to 600). In nephrosis, the total lipoids are increased (600 to 700 normal value) also the cholesterol is increased (normal 140 to 170). Both the serum protein and serum albumin fall below normal in nephrosis. The normal values for each one respectively are 7.5 to 8.5 per cent, and 5.5 per cent. The inorganic phosphorus in increased in chronic nephritis. The serum globulin is increased in comparison with the albumin.

TREATMENT

1. Rest in bed is important during the acute attack, as activity may increase the albuminuria and hematuria. This period may last from four to six weeks, and if by this time the patient is free of hypertension, though not necessarily free of albumin, he may get up. He should be watched and if the symptoms return, he should be put back to bed.

2. Removal of Foci: If diseased tonsils are present, they may be removed during an acute attack, providing the albuminuria and hematuria are decreasing, and that there is no nitrogen retention or hypertension. Lyttle believes that tonsillectomy can sometimes be done from three to eight weeks after onset. If the tonsils are acutely inflamed, the operation should be deferred until this condition is well. Dental caries and sinus disease should likewise be treated.

3. The Diet: Much has been written on this subject, and many diverse views have been held. What is desired, is to give an adequate diet of at least one gram of protein per pound of weight. Formerly protein was contraindicated, but since there is loss of protein in the urine, it must be replaced. The child also needs protein for growth. Of course, during the very acute stages all that the child requires is milk, 1200 to 1600 c.c. If this is not tolerated, offer 5 per cent glucose in orange juice. Either stick candy or dextro-pops may be offered along with fruit juices; later vegetables may be given, and gradually eggs, meat, and bread are added. In the nephrosis variety, high protein diets have benefitted many. Tonics such as the vitamins and iron are given. Other measures such as sunshine and fresh air are beneficial. Some authors have reported beneficial results from diets of low salt and non-acid producing foods. This diet is the Eimer and Voigt low protein and low salt alkaline diet.

In the treatment of edema, sweating is too exhausting and should not be used. The diet should be salt poor (milk has a low salt content). Alkalies (Fisher theory), acid salts (ammonium chloride 60-90 grains daily), calcium chloride, lactate or gluconate (60-90 grains daily), and other diuretics may be tried. Salyrgan in small doses has been tried in edema, but must be used with caution as this mercurial may have damaging effects on the kidney. Acacia, according to the method of Hartman and his co-workers, has been beneficial in some instances, especially in nephrosis with edema. Thyroid medication in large doses has been tried. The dosage should be carried up until the pulse increases in rate and a slight fever results. Hyperpyrexia induction in nephrosis has been tried, and also protein shock (typhoid vaccine), but with varying results. Decapsulation of kidney (Edebohl's operation) has been recommended in the chronic tubular variety, but with doubtful results. It is rarely used today.

During the course of acute hemorrhagic nephritis, the blood pressure may rise and when the pressure mounts to a certain level convulsions ensue. The blood pressure should be taken repeatedly and often by forcing fluids, the blood pressure will fall. The blood pressure is due to the cerebral edema, which in turn causes increased intracranial pressure. The forcing of fluids dilutes the toxins, which are then excreted by the kidneys. The toxin changes the colloids of the brain to a form which will absorb water, thus causing edema, followed by increased arterial and intracranial pressure, and finally leads to convulsions. Fluid restriction,

catharsis, and sweating, therefore, are contraindicated. If the blood pressure mounts, in spite of forced fluids, magnesium sulphate 50 per cent, from 1 to 2 ounces by mouth, will often bring about a lowering of the pressure. Magnesium sulphate by mouth in large doses, as Aldrich has brought out, at first causes a catharsis, but later does not have this effect. If the patient is unconscious and convulsions are impending, the magnesium sulphate may be given by intravenous route in a 2 per cent solution (10 c.c. per pound). The sulphate is given in one arm, and in the other the blood pressure is taken. As the pressure falls, clinical improvement follows quickly, characterized by a return of consciousness and cessation of convulsions. This rarely needs to be repeated but once. Usually about 100 to 300 c.c. are required. Following this the sulphate can be given by mouth and then a gradual return made to the diet outlined above. The magnesium sulphate in 50 per cent solution may be given by intramuscular route, usually 2-6 c.c. This method has been shown to work as effectively as the intravenous route, and for obvious reasons is better. Also spinal puncture may help in severe cases. Magnesium sulphate works according to Fisher's theory by causing a shrinkage of the colloids of the brain, which releases the water which is then taken by the blood stream to be excreted in the kidneys.

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DISCUSSION

Dr. Harris Hosen (Port Arthur, Texas): I want to congratulate Dr. Graubarth on his review of this subject which was interesting and complete in every detail. I am especially interested in the fact that the use of magnesium sulphate intravenously or intramuscularly was stressed in the presence of nephritic coma. It is of great importance to be aware of the advent of coma. Our best clinical sign is the blood pressure. When the blood pressure of a child reaches 120 and over we should be warned of approaching cerebral symptoms. It is at this time that preventive treatment of pending coma should be instituted. The treatment is magnesium sulphate by mouth if conscious, by needle if unconscious. But a note of warning should be stressed in the use of magnesium sulphate when the kidneys are so badly damaged that a state of anuria or near anuria is present. The blood has 1.8 to 2.5 mg. of magnesia to 100 c.c. of serum. When this level reaches 17 mg. a magnesia coma is precipitated. In the presence of severely damaged kidneys it only takes two or three purgative doses of magnesium sulphate to raise the magnesium in the blood to a dangerous level within as short a period as four hours. Sodium sulphate can be used without this danger. In the event of magnesium coma calcium chloride intravenously is supposed to be specific.

Dr. Julian Graubarth (New Orleans): I wish to thank Dr. Hosen for his discussion. I cannot quite

agree with all the dangers of magnesium sulphate as pointed out by Dr. Hosen. Magnesium sulphate has been used over a long period of time and any bad effects from its use are so negligible that one should not hesitate to use it. The colloids of the brain are swollen with water, the so-called wet brain. As a result of this swelling the intracranial pressure is increased. This increased intracranial pressure is the cause of the coma and convulsions. By giving magnesium sulphate the colloids of the brain which are loaded with water shrink. This excess water is taken up by the blood stream and later excreted by way of the kidneys. The final result is, therefore, a lowering of the intracranial pressure with a cessation of the convulsions and also a lowering of the blood pressure.

A COMPARATIVE OBSTETRICAL AND GYNECOLOGICAL STUDY OF THE WHITE AND COLORED RACES*

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and
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To those of us practicing gynecology and obstetrics in the deep South, the negress presents a very interesting problem, and a comparative study of the colored and white races along the lines of the aforementioned specialties brings forth much valuable data. In order to do this survey, we have made use of the yearly reports of the Charity Hospital of Louisiana, and the reports of our Maternity (Out-patient) Service of the Touro Infirmary.

In a limited report such as we present here, we shall not go into detail as regards all gynecological and obstetrical conditions, but only the more common ones which we meet in our daily routine. In the first place, we must recognize that the negro of today, in at least 50 per cent of the cases, is not pure-blooded.

The second fact that we must realize is that the social and moral status of the colored race is lower than that of the white, and that as a result, undernourishment is greater, and venereal disease is more rampant.

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*Read before the Louisiana State Medical Society, Lake Charles, April 27-29, 1936.

OBSTETRICAL

In a paper by one of us (W. E. Levy) some years ago before the Southern Medical Association, much comparative data was presented, and in bringing the Touro records up to date, we see only a corroboration of the conclusions that were drawn at that time.

It was pointed out that except for the greater prevalence of syphilis among the colored, and the comparative infrequency of birth injuries among them, very little difference exists between the two races obstetrically.

The pelvic measurements of the two races reveal very little difference, and the "standard" pelves of each, show very little variation except in two of the external measurements.

Comparative pelvic measurements of both races: (See table at bottom of page.)

In the Touro Maternity clinic we have not observed the so-called "flat rachitic" pelvis to be more frequent in the colored than in the white. As a matter of fact, we believe rickets is no more prevalent in the colored than in the white, in our section, due to the great amount of sunshine and fresh fruit and green vegetables that are available from childhood. Most reports to the contrary are from Northern clinics, where the negress, so to speak, is removed from her natural environment and lacks food rich in vitamins.

In a personal communication from S. M. Vassalls in Zanzibar, East Africa, he states, "First of all, the contracted pelvis is definitely uncommon, since rickets is a very exceptional disease in the Tropics."

The occurrence of syphilis is indeed much greater in the colored than in the white. At the Charity Hospital, taken as a whole, the incidence is about 5 to 1 in favor of the negress.

In our own out-patient obstetrical clinic at Touro Infirmary, it is 7.8 per cent for the colored, as compared to 1.6 per cent for the whites, or practically the same ratio of 5 to 1. Williams, from the Johns Hopkins Clinic, reported 16.29 per cent and 2.48 per cent, re-

	Inter-spinous	Inter-cristal	Intertro-chanteric	Baude-locque	D. C.	T. C.
White	23.4	26	30.11	18.6	12.30	10.80
Colored	21.9	24.9	30.5	18.71	12.20	10.70

spectively, or a ratio of approximately 6.5 to 1. McCord, however, gives a much higher incidence of syphilis in the negress than either of the above, viz. 30 per cent. This higher incidence of syphilis in the colored race is no doubt the causative factor in the greater number of premature births among them. C. J. Miller, in a studied series of 359 premature births, showed 59 per cent were colored and 41 per cent were white. However, our last yearly report of Touro shows a total number of premature births of 26, of which 16 were white and 10 colored. Of the total deliveries, the incidence was 4.39 per cent for the white and 2.8 per cent for the colored. This apparent discrepancy from the usual, is the result of the early and intensive treatment of Wassermann-positive cases, and is another strong argument for proper pre-natal care.

Spontaneous delivery among the colored race is greater than among the white, our own figures showing an incidence of 93 per cent in the negress and 86 per cent in the white. This compares with the figures given by Riggs of 84 per cent and 80 per cent respectively, and the recent ones of Pride of 95.45 per cent and 92 per cent. C. J. Miller, in a review of abnormal deliveries at the Charity Hospital, showed an incidence of 4.5 per cent for the colored and 11.1 per cent for the whites.

The greater number of normal deliveries among the colored, we attribute to several reasons, chief among them are:

The relative contractions in the negro pelvis are less than in the white. In a large series of measurements of the babies of both races, we found that the negro infants are nearly one pound less in weight than are the whites. Omitting all the prematures of both races, the average weight of the colored infant was 6.88 pounds, or 2939.26 grams, while that of the white infant was 7.43 pounds, or 3280.16 grams. Furthermore, we disagree with Pride as to the inability of the negro head properly to mold, and find that it molds equally as well, or even better than in the white.

In addition to the above, we have made the observation, as have others, that the nervous system of the negress is less sensible to pain, and as a result she stands a longer labor with more stoicism.

As mentioned before, the incidence of birth injuries in the colored woman is markedly less than in the white, and from a study of the postpartal patients, this is borne out. We attribute this to the greater percentage of normal deliveries, and as shown above, to the smaller babies, both as to weight and head circumference. In the section devoted to the gynecological comparisons, we shall present figures which will bear out this contention, by showing that plastic and corrective surgery of the female genitalia are very much greater in the white race.

GYNECOLOGICAL

From a gynecological standpoint, the difference between the two races is quite marked. The pathology in the colored is much more extensive, due to the greater incidence of gonorrhea, and also to the fact that as a rule they do not apply to the hospital until they are nearly incapacitated by the ravages of disease. Furthermore, an expectant line of treatment cannot be employed with the colored race, either due to their ignorance and refusing such a plan, or their economic status, which does not permit of the above, but requires that they be able to help maintain themselves as soon as possible.

Gynecological admissions at Charity Hospital:

	White	Colored
1926 total	1336	1699
1927 total	3678	1583
1928 total	3239	1678
1929 total	2673	2342
1930 total	4442	5820
1931 total	2320	2336
1932 total	2386	2188
1933 total	2899	5849
1934 total	1568	1582
1935 total	3930	5776
Total for ten years ('26-'36)	28471	30853
Percentage of total	47.99	52.01

Pelvic inflammatory disease is rampant in the colored and is much more frequent and severe than in the white. At the Charity Hospital, for the ten years from 1926 to 1935, inclusive, there were a total of 59,324 gynecological admissions, of which 28,471, or 47.99 per cent were white, and 30,853, or 52.01 per cent

were colored. During this period the total number of white cases admitted with the diagnosis of chronic salpingitis, acute salpingitis, or pelvic inflammatory disease were 4358 or 15.3 per cent of the total white gynecological admissions. In a like period, with similar diagnosis, there were 8203 or 26.5 per cent of the total colored gynecological admissions. Nearly two-thirds of the total number of cases admitted with pelvic inflammatory disease were negresses. Due to the specificity of the disease, and to its extensiveness due to neglect, complete extirpation of the pelvic organs is nearly always the general rule in the colored woman.

Another condition in which all of us recognize that a difference exists, is in the frequency of fibroids of the uterus. The difference in favor of the colored race is very marked, but no clear reason has been given for this. Vassalls suggests that fibroids are in some way related to the absorption of oestrin and that the ovaries in the tropics are more active. He further states that fibroids are so common, that they are found in practically every abdomen which is opened for any condition whatsoever. Since our American negress is a direct racial descendant of this type of people, heredity may be an important factor in our cases.

For the ten-year period before mentioned, there were 712 white cases operated upon for fibroids of the uterus, and 5109 colored cases. Thus the percentage of the total fibromas was 12.2 per cent for the whites and 87.7 per cent for the colored. Of the total white gynecological admissions, 2:5 per cent were for fibroids. Of the total colored, 16.5 per cent were for fibroids. Really astounding figures. Greene, reporting five hundred laparotomies on the colored women at Grady Hospital in Atlanta, shows an occurrence of fibroids, either uncomplicated or otherwise, of 398, or nearly 80 per cent.

It is when one comes to review the figures of the diagnosis of conditions arising as a result of birth trauma, that another very distinct difference between the two races is noted. During the same ten-year period there were tabulated under these conditions the following:

	White	Colored
Lacerations of cervix, old	1657	451
Percentage of lacerations	78.6	21.4
Percentage of total cases	5.8	1.4
Erosion of the cervix	390	61
Percentage of total erosions	86.5	13.5
Percentage of total cases	1.4	.198
Displacement posterior	1033	705
Percentage of total displacements	59.5	40.5
Percentage of total cases	3.6	2.3
Prolapse, complete	249	70
Percentage of total prolapse	78.1	21.9
Percentage of total cases	.875	.227
Endocervicitis	2165	742
Percentage of total endocervicitis	74.5	25.5
Percentage of total cases	7.6	2.4
Lacerations of perineum	939	264
Percentage of total laceration of perineum	77.22	22.78
Percentage of total cases	3.1	0.8
Relaxation of perineum	387	91
Percentage of relaxation of perineum	80.9	19.1
Percentage of total cases	1.39	0.3

From the above figures, it can be definitely stated that birth injuries are much less frequent in the colored than in the white, and tend to substantiate the observation made by one of us (W. E. Levy), some years ago, based on the examinations of five hundred colored and five hundred white women in the post-partal clinic of the Touro Out-patient Maternity Department. Miller shows, however, that the incidence of fistulas is more frequent in the colored, due as he says, "To a lack of cleanliness, and in the case of rectal fistulas, to the high incidence of rectal syphilis."

As regards carcinomas of the uterus (all types), from the figures we have obtained from the Charity Hospital records for the years under study, we find the incidence in the two races, for all practical purposes, approximately the same:

	White	Colored
Carcinoma of the uterus, all	1970	2168
Percentage of total uterine carcinomas	47.6	52.4
Percentage of total cases	6.9	7.0

Very few early carcinomas are seen in either race, due to the type of population from which both are drawn. It is estimated that not over 1 per cent of the total could be classed as operable, according to the classification of Schmitz.

It is in respect to granuloma of the cervix uteri that we gather some astounding figures. This is a condition that has only comparatively recently been diagnosed. Of a total of eighteen cases seen within the last three years at Charity Hospital, sixteen, or 88.9 per cent are in the colored race. In spite of the rarity of this condition, we wish to bring it to your attention, as it must be differentiated from carcinoma of the uterus. This however, can only be done by microscopic section.

In a paper such as we have presented here today, it is at once obvious that we have merely scratched the surface of this very important and interesting study. However, there are some very definite clinical facts based upon such an actual statistical study.

SUMMARY

1. Except for the Wassermann reaction, and the comparative absence of birth injury to the negress, very little difference exists between the two races obstetrically.

2. One striking lesson learned from the study of post-partal cases, and corroborated by the comparative study of surgery done for birth injuries from the records of Charity Hospital, is that the colored patients suffer much less degree of birth injuries than do the whites, as proved by the preponderance of vaginal repair work among the whites. There were 1326 operations of this type among the whites, as compared to 355 operations among the colored, for the ten year period.

3. That the gynecological abdomen of the colored woman is one that presents either fibroids or pelvic inflammatory disease, or a combination of both, whereas in the majority of the white cases such is not found. Furthermore, as a result of the extensive pathology, it is almost impossible to do conservative gynecology in the average colored abdomen.

4. That the incidence of carcinoma of the uterus (cervix and body) is practically the same in both races.

5. That the comparatively recently diagnosed condition of granuloma of the cervix is predominantly present in the colored race.

DISCUSSION

Dr. Ben Goldsmith (Lake Charles): The facts and conclusions as presented in the paper are in keeping with the experiences of most of the men in this assembly.

From the obstetrical side, most of us who are doing general practice, particularly in the rural sections, are seldom called in by the negro midwives who handle most of these labor cases. Here, patients turn a deaf ear, and procrastination usually results in a normal spontaneous delivery, whereas with the white patients, where attempts are made to lighten labor by the use of narcotics, sedatives, and so forth, with the pleadings of the husband, the mother and other relatives demanding interference, there is frequently too early instrumentation. This, in part, accounts for the more frequent spontaneous deliveries in the colored race.

In pelvic inflammatory diseases, as seen in the colored race, their aggravated states may be

summed up in a phrase used by the authors of this particular paper, and that was the lowered social and moral status of the colored race which results in their frequent infection and re-infection, their lack of treatment, their improper treatment, and their delayed surgery, going on into wide-spread infection throughout the pelvis.

A few other conditions that are seen more commonly in the negro race, such as venereal warts, rectal stricture and urethral stricture are more commonly the result of the prevalence of syphilis and gonorrhea, and the unhygienic care in that particular race.

Dr. A. L. Culpepper (Alexandria): It is a distinct pleasure to have heard this carefully prepared address. It must have entailed a great deal of labor. The authors are to be congratulated. In this paper, you will notice that the incidence of carcinoma is almost the same in the white as in the colored, yet the essayists go on to say that the ratio of cervical injury is a great deal less in the colored. That struck me as being rather important. I wonder if that is explained by the fact that douching and hygiene in the white is considerably more advanced than in the colored. We do feel, I think, that carcinoma of the cervix is produced by laceration and by infection.

I should like to have them elaborate on this, if they will, please.

Dr. E. L. King (New Orleans): Along the lines Dr. Culpepper just mentioned, it has often occurred to me that one possible explanation of the lowered frequency of birth injuries in the colored may be due to the fact that they start their obstetrical life earlier than the whites, as a rule. If they are going to become pregnant and have babies they generally start by the time they are fourteen, fifteen or sixteen years of age, whereas in the whites the obstetrical life is generally begun at a later date.

I think it is a pretty well established fact that young women between fifteen and twenty years of age do not sustain damage to the same extent that older women do when we consider the first pregnancy.

Another thing to be considered is that these are hospital statistics. We know that the members of the colored race are inclined to abstain from hospital treatment, unless they are rather ill. White women will go to the hospital for perineal lacerations and endocervicitis. We know that endocervicitis is not infrequent in the colored. The white race will go to the hospital, whereas the colored race will not worry unless the condition is very pronounced. I believe those two facts will help to explain the discrepancy in these statistics. On Dr. Culpepper's point, it is possible that the colored race have just as many carcinomas of the cervix as the whites, but they do not go to the hospital.

Another point I would like to mention is the comparison of the fetal head in the two races. Would it not be better to take the circumference of the head rather than the occipitofrontal diameter?

Dr. Walter Levy: That was the occipitofrontal circumference.

Dr. E. L. King: I misunderstood that particular point. The frontal diameter in the newborn baby might be quite different at birth from the condition two, three or four days later.

Dr. Walter E. Levy (New Orleans): In answer to Dr. Culpepper, I rather expected that question to come up. For two reasons, I think it can be answered. More white women have postpartum care. Furthermore, nearly every negress at some time in her life has a chronic infection. I think the chronic infection of the cervix accounts for more instances of carcinoma. Birth injuries alone are not the cause of carcinoma of the cervix. I think the chronic irritation of the cervix is sufficient to set the place afire.

In answer to Dr. King, I have a copy of this paper from the Southern Medical Association in Atlanta, in which this statement appears: "The colored woman gives birth to her first baby at an earlier age than does the white." The average age of the colored primipara is nineteen compared to twenty-one years for the white, which rather bears out your observation, as I rudely interrupted you to say, that the circumference of the head of the newly born infant is smaller. It was not a diameter, because a diameter can so readily be distorted by molding and pressure.

Dr. Meyer is our statistician and perhaps he could answer, but I am sure from off-hand observation that we do not see as much infection in the negro as we do in the white. We all know that increased operative incidence will cause an increased infection, even in episiotomy. There was a paper by Peckham in the last issue of Gynecology and Obstetrics which brought that out. Most of the colored deliveries are normal deliveries and not operative. I think that accounts for our low incidence of infection in those women.

THE SHRUNKEN LUNG*

A. MAYORAL, M. D.
NEW ORLEANS

Within the past few years some unusual and interesting cases of lung shrinkage have been observed by me, some acute, others chronic. Aided by the clinician, bronchoscopist, bacteriologist and pathologist, a definite cause or strongly presumptive evidence of the cause was found in each and every one of these cases. A report of seven of these unusual cases is the subject of this paper.

CASE REPORTS

Case 1. G. B., a white CCC boy, was admitted to the Hospital on August 26, 1935, with signs and symptoms pointing toward lung pathology. A roentgenogram was made on August 29 which revealed a localized, roughly triangular area of infiltration of the left lung, probably the apex of the lower lobe, thought to be early pneumonia or an infarct. The patient was very ill at this time. A tentative diagnosis of pneumonia was made, and he was placed in an oxygen tent. No other roentgenograms were possible until September 26, 1935. Now the classical signs of atelectasis of the left lower lobe were present, and the diagnosis was changed to atelectasis, lobar, left lower lobe. Because of the duration of the atelectasis, the formation of an abscess was predicted unless the obstruction was removed. A roentgenogram on October 3 showed the shrunken left lower lobe and compensatory expansion of the upper lobe. On October 14 the suspected abscess had developed. By December 17 the lung had re-aerated and the abscess drained, leaving no signs of previous pathology except adhesions at the left costo-phrenic angle.

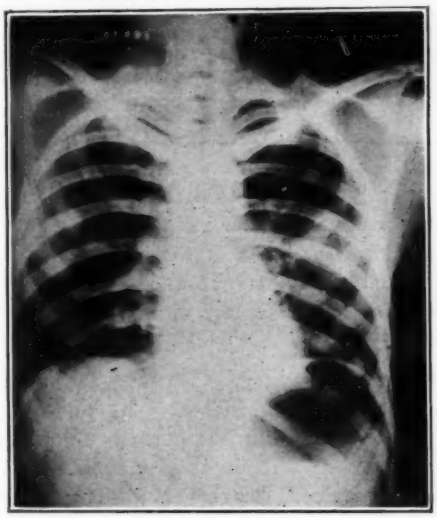

Fig. 1. Case 1. Early lung lesion.

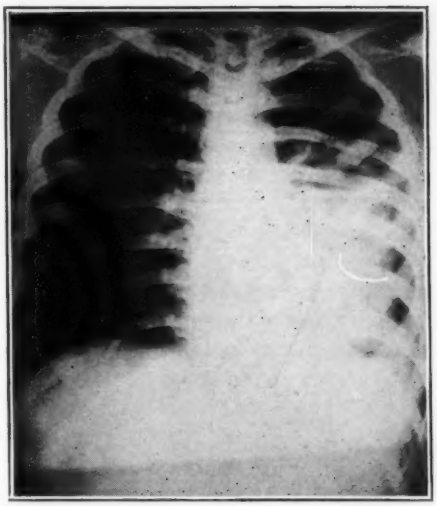

Fig. 2. Case 2. Atelectasis left lower lobe. Abcess predicted at this time.

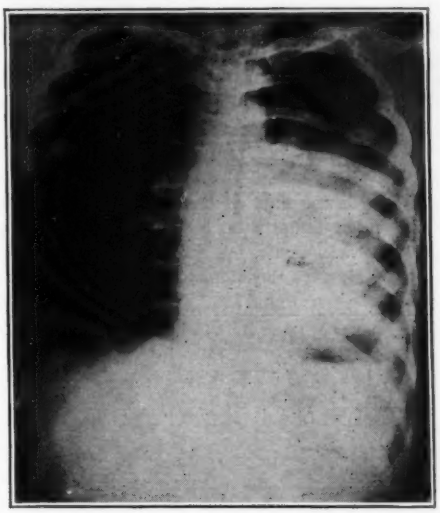

Fig. 3. Case 1. Showing abscess in the shrunken lower left lobe.

Case 2. J. L. H., a young boy, was admitted

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*Read Before the Orleans Parish Medical Society Clinical Meeting at United States Marine Hospital, June 22, 1936.

†From the Department of Radiology, U. S. Marine Hospital, New Orleans and Tulane University.

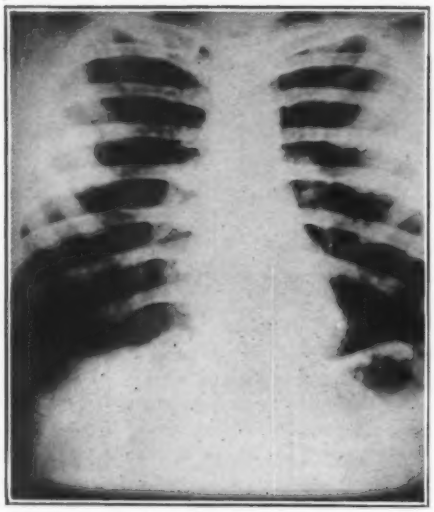

Fig. 4. Case 4. Showing lung re-aerated.

April 12, 1936 from one of the neighboring CCC camps, with the diagnosis of endocarditis. The boy gave a history of having had influenza a few weeks previously, from which he was slow to recover. The physical examination ruled out endocarditis. Definite physical signs were found at the base of the left lung. A roentgenogram on April 14, 1936 showed the typical signs of shrinkage of the lower half of the left lower lobe. The diagnosis of atelectasis, lobar, incomplete of the lower lobe was made. A roentgenogram ten days later still showed the signs of atelectasis, plus an

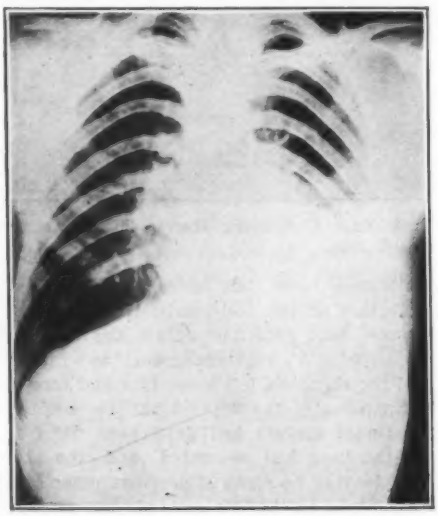

Fig. 4. Case 2. Showing lower half of left lower lobe shrunken.

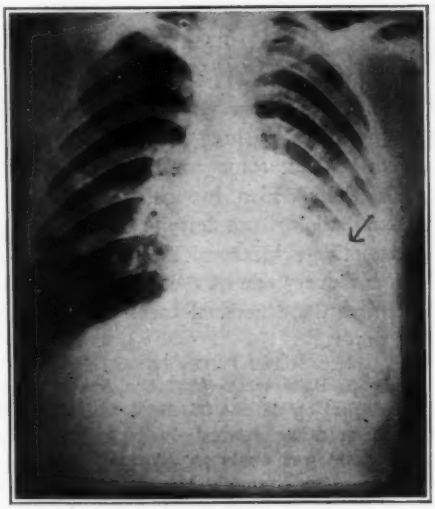

Fig. 6. Case 2. Abscess. (Arrow pointing.)

abscess cavity about the fourth interspace anteriorly. Thirty days later all previous pathology, except the shrinkage, had disappeared.

The preceding are cases of acute, partial or complete lobar atelectasis. The presumptive evidence is that the shrinkage of the lobes followed occlusion of the main bronchus leading to the lobe or portion of the lobe affected, by inflammation of the mucous membrane of the bronchus, a mucus plug, or a combination of both.

These two patients had a stormy time and long convalescence. In both cases solitary abscesses formed within the portion of lung collapsed. When aeration was re-established the abscesses drained, leaving no signs of their previous existence. The lung remained shrunken.

Case 3. M. S., a white male, 40 years of age, was admitted to the hospital June 10, 1935 for inguinal hernia. The history revealed he had developed rupture about a month previous. Since last pneumonia he has had intervals of severe coughing. For past twelve years the patient has done no strenuous work. Roentgen ray on January 11, 1935 showed extensive infiltration of the left lower lobe, retraction of the heart to the left, elevation of the left diaphragm, and intercostal spaces not markedly diminished. Findings reveal lung shrinkage and suggest bronchiectasis. Lipiodol injected May 1, 1936 confirmed the diagnosis of bronchiectasis. A specimen of secretion taken

through the bronchoscope yielded a pure culture of what the National Institute of Health at Washington classified as Bacillus alkligenes Bookeri. Diagnosis: Bronchiectatic atelectasis.

The history of two previous pneumonias and the severe cough, remaining after the last pneumonia, are strong evidence of prolonged infection, probably aggravated by the saprophyte, B. alkaligenes, causing collapse of the lung because of inflammatory occlusion of the bronchi. The repeated and persistent cough was responsible for the dilatation of the weakened bronchial wall.

Case 4. A. A., a colored patient, 44 years old, was admitted to the hospital November 11, 1929, with a diagnosis of syphilis. This diagnosis was not confirmed and the patient was discharged eight days later, fit for duty. At this time patient had a dry cough, occasional night sweats and had loss of some weight. He was readmitted on April 22, 1935. His chief complaints then were "Fever in stomach and shortness of breath." Examination at this time was negative except for a slight lag of left chest, increased fremitus of right lung and decreased over the left lower lung, with some dullness. Roentgenogram at this time shows soft

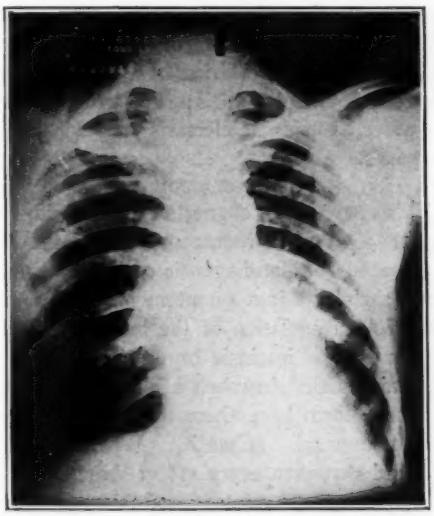

Fig. 7. Case 4. Shrunken lower half of left lower lobe, due to bronchiogenic carcinoma.

infiltration, central zone, left lower lobe, suggestive of pneumonia, possibly bronchiectasis, and pulmonary shrinkage. Further roentgen ray studies after lipiodol confirmed the diagnosis of bronchiectasis. Bronchoscopy again confirmed diagnosis and biopsy revealed bronchiogenic carcinoma. The patient died July 17, 1935. An autopsy confirmed the diagnosis and revealed extensive metastasis. Carcinoma cells had infiltrated the mucous membrane of the main bronchus of the lower lobe causing partial occlusion. The diagnosis is definite: Lung shrinkage due to occlusion.

Case 5. F. J., a colored boy, aged 25, was admitted from a neighboring CCC camp, with a diagnosis of acute gonococcal urethritis. Routine physical examination revealed marked displacement of the heart to the right and tympany of the right lung suggestive of pneumothorax. The past history was negative, except for pneumonia some years ago. The patient had no other symptoms.

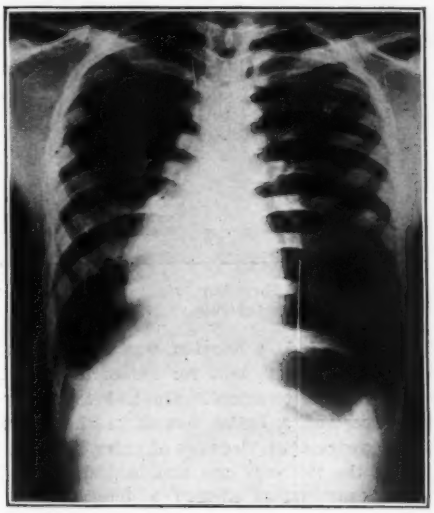

Fig. 8. Case 5. Heart displaced to right because of partially shrunken right lower lobe.

Because of the chest findings, roentgenogram was ordered May 5, 1936. Partial shrinkage of the right lower lobe with compensatory expansion of the middle lobe was diagnosed. Bronchoscopic examination showed occlusion of the main bronchus of the right lobe. Biopsy revealed old fibroid tissue. Diagnosis: Partial collapse of the right lower lobe, compensatory emphysema of the middle lobe.

Case 6. J. N., a colored male, aged 42 years, was admitted to the hospital February 4, 1936, for lobar pneumonia of the right lung, complicated with pleurisy with effusion. The patient had a prolonged convalescence. The reason for this prolonged convalescence is explained in the roentgenogram. The first roentgen ray taken at time of admission, showed the complete opacity caused by the pneumonia and pleural effusion. The second made twenty days later and the third one, one and a half months later, showed marked fibrosis of unresolved pneumonia, and unmistakable signs of lung shrinkage. The sputum was repeatedly negative for tuberculosis. This case was one of chronic interstitial pneumonia with definite lung shrinkage following lobar pneumonia.

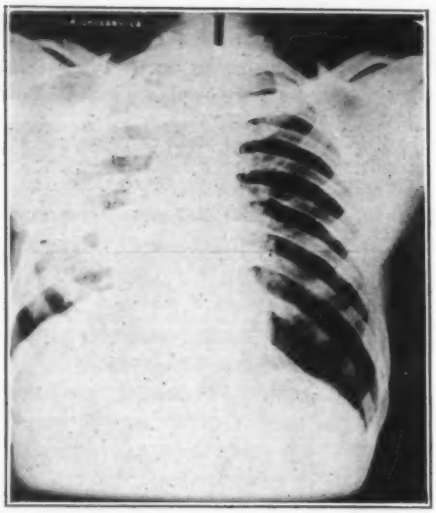

Fig. 9. Case 6. Shrunken right lung because of chronic interstitial pneumonia.

Case 7. L. H. J., a Russian, was admitted to the hospital February 6, 1933 for hemorrhoids, mixed type, cause undetermined. He had a history of having received a bullet wound in the chest in 1913 (20 years ago), the port of entry being at the center of the sternum, and exit behind axilla. The physical examination showed a deformity of the left chest. Auscultation revealed decreased breath sounds and increased resonance of the left lung. Roentgenogram ordered on February 20, 1933, showed a partial shrunken lung with the usual signs of lung collapse and calcification of the pleura extending from the apex to base preventing expansion of this lung. His chest wound was not followed by the stormy and severe symptoms of puncture of the lung. The assumption that the bullet followed the line of one of the ribs from entry to exit seems correct, causing a slow leakage of blood into pleural cavity, followed by organization and calcification. Diagnosis: Compressive atelectasis following hemothorax, sustained by calcified pleura.

Fig. 10. Case 7. Compression of lung by calcified pleura following hemothorax.

DIAGNOSIS

If the classical signs (elevation of the diaphragm, displacement of the mediastinum toward the affected side and narrow intercostal spaces) are present, the diagnosis presents no special difficulties, but not always are all these signs present. Inflammatory exudate may have expanded a contracted atelectatic lung before it comes to examination. Then the diagnosis is difficult or impossible until other signs appear.

Pneumonia and pleural effusions can, as a rule, be easily differentiated but a lung compressed by a retracted chest wall and elevated diaphragm, sometimes following acute pleural inflammation, is not so easily differentiated. In such cases the position of the mediastinum will clinch the diagnosis; if displaced toward the affected side atelectasis should be the diagnosis.

CONCLUSION

This short series suggests the following conclusions: A good roentgenogram of the chest is essential for the diagnosis of lung shrinkage. Lung shrinkage is a symptom or sequela, most cases follow occlusion of the bronchi. The occlusion can be intrinsic or extrinsic. For the lung to remain shrunken after an effusion as the case shown here (hemothorax in this case) is most unusual. (Case 7). Whenever a lung is found shrunken every effort should be made to determine the etiology, as this can be due to a benign, a malignant or inflammatory growth, the prognosis being good or bad accordingly. For a thorough study of the condition the aid of the bronchoscopist is indispensable. A biopsy should be made in every case when possible.

Acute atelectasis cases are often followed by abscess formation if the occlusion is not promptly relieved. In these cases complete healing followed re-aeration and drainage.

The final outcome of obstructive non-mali-

gnant atelectasis depends roughly on the length of time the occlusion has existed plus the amount of permanent obstruction. Complete collapse will follow complete obstruction. If the obstruction is removed early, complete expansion will follow with no residual pathology. If not complete and given time to organize, partial shrinkage or emphysema, depending on the amount and type of interference with the tidal air, will be the final outcome.

Lungs compressed because of effusion in the pleural cavity are not considered here. Patients afflicated with tuberculosis have been purposely eliminated.

CANCER IN GENERAL; OF THE BREAST IN PARTICULAR*

E. L. SANDERSON, M. D.
SHREVEPORT, LA.

The subject of cancer, like that of tuberculosis, has been discussed so much; the social service minded grafters have sold seals and made drives and organized every kind of a Society in the name of these two scourges that could be thought of and that could support one or more secretaries and organizers; in fact, so much has been said and so little done, that the medical profession and the general public also, has become acclimated to the educational campaigns and barrages of propaganda, and have settled down to a passive resistance or active endurance like a tramp regards his sore leg. For this reason, largely, I feel like apologizing when I offer a discussion on cancer.

If you are forty, you have one chance out of eight to have the disease before you die; and if you do not die of heart disease your next best bet will be that your death certificate will name cancer as the cause.

The second great obstacle to progress in the cancer situation is statistics.

If it were only a new disease. If we could forget all that has been said up to about five years ago in regard to the surgical treatment, and all that was said about radiation treatment up to about three years ago, it would be the greatest advance of all time toward a solution.

It is so much easier to send for a can of pickeled statistics than it is to think. You feel so much safer when you can furnish a page of bibliography to back up your presentation, rather than to run the risk of having your reasoning discounted during discussion by reference to what this and that authority had done and said.

A few years ago, I listened to a symposium on cancer in Chicago. The greatest surgeons and specialists in America and of some of the other countries were the speakers. I sat with mouth agape at the great opportunity that was being afforded, until, perhaps the peer of them all remarked that he had seen cancer return after twenty-five years and, strange to say, was in a different part of the body.

I received a shock; my hero had lowered his shield. With my limited knowledge, I had sense enough to know that what he spoke of as a return might and probably was a cancer that had nothing to do with the previous case and would probably have come to this patient even had he never had one before. Like a child who first learns there is no Santa Claus, I became skeptical during the whole afternoon of discussion.

I heard the word "radical" used synonymously with "eradicate," in speaking of operative procedures. I heard radiological statistics covering a period of time back to when the treatment was undoubtedly harmful to most of the cases. At the close, I could but recall the Biblical illustration of pouring new wine into old wine skins. I was not the only one so impressed. Therefore in 1932 when I became Director of a Tumor Clinic, I felt that our greatest obstacles were statistics and precedent, and so they were.

We were fortunate in having the services of a pathologist and a radiologist of outstanding ability. We sent them both to the best Cancer Clinics to study and observe and to forget preconceived ideas if facts justified it. We have sent them every year since.

Our radiologist was and still is, over-enthusiastic; they all are, and they are better for it. The rest of us had rather set ideas, more or less based on some authority who had impressed

*Read before the Louisiana State Medical Society, Lake Charles, April 27-29, 1936.

us sometime somewhere. But time, and more than two thousand cases, has tempered us all. No effort has been made to pioneer or experiment. We are following the most successful methods of the best Clinics, provided the procedure is based on reason and common sense.

Cancer as an open festering sore, disfiguring and foul smelling, is offensive even to a physician; it is disgusting.

The study of blood was intricate, and its action and functions uninteresting until Metchinkoff likened the blood cells to individuals. People are always interesting. He pictured the white cells as soldiers; each type with a special part to play. Like a flash the phenomena of congestion, inflammation, pus formation and all the rest became comprehensible and interesting.

We apply his graphic reasoning to the fixed cells of the body as well. If the circulation represents the transportation system of the body; and if the blood cells are the freight and express men, soldiers and what not, we would portray the fixed cells of the liver, kidney and muscles as communities of citizens; some engaged in manufacture, some in transformation of power or force, some carrying on the transmission of information from community to community, and still others handling sanitation and sewerage. Thank goodness, we have none in the electric light business: the lightning bug is a jump ahead of us there.

Now, cancer is not a disease as disease is commonly defined. Cancer is normal body cells "gone bolshevik". They are anarchists and become such for the same reasons that ordinary citizens begin to see "red" and later become "red". Just feed any of us too little too long, or rub us the wrong way for long enough time and we become "agin everything"; disobedience to law becomes our joy; we accept sustenance and protection from the community but give nothing in return. The less we work and the more we denounce responsibility the more little bolsheviks we raise; we are now a cancer. Do not ever try to reconvert an anarchist; do not jail some and run others off, for you are planting them in other communities. Destroy the last of them at one time or place them all in jail for life. A well trained armed force might keep them confined to one section for a long time. Just picture your cancer as a society of anarchists, and the subject becomes interesting, the treatment rational.

No longer do you smell decayed human flesh; it is the odor from the bodies of individuals who have died of their own folly; overcrowded and disorganized, their only thought and purpose to eat and breed.

The lymph nodes are the fortifications distributed throughout the body; the analogy is perfect in every detail; and if used as a straight edge to lay alongside your cases before treatment is begun, you will avoid mistakes that you might regret but cannot recall.

No wonder that cancer incidence is increasing, and that the question is already overwhelming. It is the social question of the body cells. Perhaps they need a wise president and a long alphabet; but that leads into politics.

The real purpose of this paper is to apply our bolshevik theory to cancer of the breast. The cells of the mammary gland are highly specialized. A high spirited sensitive community that knows but one trade, and whose activity is controlled by not only supply and demand, and the whimsical and often erratic suggestions from other distant organs of the body, mainly the sexual group, but have the added demoralizing influences of outside sources such as traumatism due to their exposed position, clothing and other unnatural irritations.

There was a time when we walked on all fours and the female breasts were supported evenly by the fibrous septa and trabeculi, and their semi-globular shape was maintained by gravity. Now their position on the chest is maintained by a continual pull on the upper half and a compression on the lower half. While the mammae of lower animals are protected by their position underneath the body, the human mammary glands are as violently exposed to injury as the headlights on a car. It is also true that no other animal manhandles the milk organs as does man. It perhaps does no harm to caress, but undoubtedly mastitis, adenoma or malignancy is quite often produced by inhumanly fondling the breasts.

Then we have the functional irritation; erotic impulses from distant but associated or-

gans, namely the genitals. In fact, the more you think of it the less you marvel at breast disease; you rather begin to wonder that the mammary cells stand so much before rebellion and bolshevism results.

It would be interesting to know how a cancer of the breast begins; in fact, any cancer, for that matter. I cannot conceive of a cancer beginning without irritation of the cells either from internal or external sources; there must be a traumatism of the cells which, instead of being followed by edema and swelling of the cell, takes on this abnormal type of reproduction and uncontrolled activity.

To treat the subject logically, and to treat the patient rationally, we must assume that there was a time when a certain cell or group of cells in the breast became irritated and annoyed, either from poor food and bad living conditions, or from the persistence of someone on the outside who just kept kicking their dog around. In any case, there is a definite beginning; and there are definite steps in the process; just exactly like the case of Bill Jones and a little band of his associates who work in the mills or down in the mines. They are all right one day; but at some definite time, their troubles, whether due to too poor food, long hours, poor pay, or nagging wives, become such that a tendency becomes an activity and they conspire to live their lives in defiance of law and order.

Every community has its sore-headed Bill Jones and his friends, but they seldom go beyond the stage of "cussing" the government. Your body is like that. There are millions of groups of cells in your various organs that are suffering from insults from within and without; these are potential cancers; but fortunately, like Bill Jones and his friends, they may feel sore and complain but are not actually anarchists.

Anarchy and bolshevism are not the products of ignorance, much as we would like to brand them as such. They are the results of a real or imaginary series of wrongs, or a particular wrong many times repeated, affecting a person or persons sensitivity; these persons often are highly intelligent. Indeed the ignorant soon become involved, but they were not the originators.

So true in cancer; and since we are now on cancer of the breast, I remind you again of the high degree of specialization of the mammary cells; they are true intellectuals and highly sensitive. They are not satisfied by mere complaining, they organize and rebel.

We now watch the process. Here is one case that progresses slowly; here is another that is rapid. Here is a small nodule that never appears alarming but the patient dies of widespread dissemination of the malignant cells.

Some show a toxemia, others do not. Anemia may or may not be marked and is difficult to explain. There is a cancer age, but children may and do have cancer of the breast. We had one case of a young woman just twenty; another in an old woman who was one hundred years old. Males have it but rarely.

All races appear equally susceptible. Incidentally, negroes seldom have skin cancer. There must be a reason for their immunity; and I believe that the prevention and cure of cancer may result from the biochemical analysis of the negro's seeming immunity to skin cancer.

The diagnosis of malignant disease of the breast is all important. Here again, worn out statistics and pet ideas and methods strike the ordinary doctor as complicated, and results in a paradox—the more you read and study cancer of the breast, the less able you are to diagnose the condition accurately.

Our growing experience seems to advise that every abnormality of the breast be considered cancer unless you can prove it to be something else.

There is no possible chance of making a reliable diagnosis of cancer of any type or of any part of the body without a biopsy and the services of a competent pathologist. I regret to say there are only a few such pathologists in our country, and the tendency to depend on girl technicians in hospital laboratories is discouraging young physicians from entering this field.

Of course there are certain broad but hazy lines that may be drawn between malignant and benign lesions of the breast by ordinary physical examination taken in conjunction with the history.

We all remember when we were told that

seventy per cent of breast tumors were malignant; the great men of our profession began about that time to deal in vast arrays of statistics, and to consider it a mark of distinction to raise the percentage of malignancy in breast tumors. Finally, it reached ninety-five. Mark Twain was more than a humorist; he must have known something about cancer. He said there were liars and damn liars and statistics. Mind you, in condemning our cancer statistics I am only condemning the source, for statistical information based on reliable sources is, of course, invaluable.

In the diagnosis and treatment of cancer, we must forget that part of the teaching of our heroes that had to do with the big charts and array of figures. They looked good and required but little effort to assemble by the doctor's secretary. But as to real value, they were not only worthless but actually harmful.

A few years ago the American College of Surgeons began to encourage and to give ratings to tumor clinics. This marked the beginning of a reliable source of information on the subject of cancer; not perfect, but far more accurate than before.

From our own twenty-three hundred cases of malignancy, we are beginning to draw some conclusions.

Briefly, we would comment that about one out of every sixteen cancer cases is of the breast and that whites and blacks are about equally affected, and respond to treatment in about the same way.

That about one-third of all breast lesions are not cancer. The negro has a smaller percentage of benign lesions than the whites.

A very few men have cancer of the breast. The age of our breast cancers range from 20 years old to one hundred years old.

Our experience would indicate that the microscopic diagnosis is the foundation for any degree of success in the treatment of cancer of the breast, and that a highly skilled radiologist with adequate equipment is absolutely indispensable. We are now discussing only cancer of the breast, but our reasoning is applicable to other regions of the body.

The surgeon comes third in importance and the more skilled your pathologist and radiologist, the less important is the skill required of the surgeon. All three are indispensable to each other; and that is not all: A medical man must stand between these cancer attackers and the patient's general condition. Just because you have a cancer does not prevent you from having other pathology; none of us would take pride in curing a cancer if we had to kill the patient in the process.

It goes without saying, that various other specialists are needed according to the region affected, but we are now speaking only of cancer of the breast.

Regarding physical diagnosis, much has been said and many procedures advocated and tried; our experience as checked by the pathologist may be briefly stated as follows:

A bleeding nipple is cancer or benign duct papilloma—fifty-fifty in frequency.

A retracted nipple associated with a breast tumor means cancer, but there are exceptions. When the skin of the breast is dimpled, resembling orange peel, associated with a mass in the breast, it means cancer. If the breast tumor is attached to the skin or chest wall, it is cancer with few exceptions.

Breast cancers are practically painless and not tender until they break down and become infected.

A tender painful not well defined thickening in a young woman's breast is a mastitis. A mass in a nursing breast is seldom a cancer.

A tumor in both breasts, or more than one tumor in one breast is practically always benign.

A well defined easily movable tumor in the breast is nearly always benign.

One-third of all breast pathology is non-malignant.

The most frequent benign condition is abscess, which is tender, painful, often red, and associated with fever and occurs nearly always in a nursing breast.

Non-suppurating mastitis occurs in children and young women who are usually precocious and whose breasts are well developed.

Adenoma, fibro-adenoma and cystic adenoma, which are all well defined, movable and not

painful or tender are usually found in young adults.

All breast lesions demand immediate and serious consideration. It is nothing short of criminal to tell a woman with a lump in the breast to "never bother it until it bothers you".

TREATMENT

The benign lesions are treated by incision, simple removal or whatnot; but regardless of the seeming innocence of the condition, the tissues removed should be immediately submitted to the pathologist to make sure your diagnosis was correct and your treatment adequate.

Now, your diagnosis of cancer of the breast is made. How shall we treat? On this one subject books have been written and statistics piled high.

There are three all important questions at this stage: Is the disease still localized in the breast? Has it migrated and been stopped in the lymph glands? Or has it gone to other parts of the body?

There is no known method of deciding these questions definitely. Enlarged glands may or may not be present. If they are present it may mean metastasis or it may mean inflammatory or absorptive reaction. If they are firm or matted together they are cancerous; otherwise, we do not know what they contain.

The roentgen ray will show metastasis in lungs or bones if well advanced; but shows nothing in the early stages.

But a decision must be made; life is now at stake. It is right here that precedent must be thrust aside. At this point statistics of ancient times must be forgotten; we must submit to reason and common sense.

Your patient is a vast country made up of communities of varying activities but dependent upon each other; their work is coordinated and their functions interrelated.

The breast you are called upon to treat is a great manufacturing center; the cells are the workers and are highly specialized and consequently sensitive. Anarchy has developed in a section of the community; it has become serious.

The governing body of the State (the brain) has appealed to you, to combat the menace. You have made your investigation and found the alarm to be justified; a cancer has developed in the breast.

You know there is a line of defense in the axilla; you palpate; Yes, the glands are enlarged; evidently there has been resistence there and the forces have been increased and the fortifications enlarged. The all important question now is, have the bolsheviks tried to travel to other communities and been stopped and interned or imprisoned in the axilla or has the increased gland activity been due to the reaction in the breast? Another question follows quickly: If they have tried to migrate and been imprisoned in the axillary glands, have they all been stopped there or did some escape the guards and have gone beyond?

Here your decision becomes as important as if you were a god. A life is in your hands. You try to sidestep the responsibility by following precedent and statistics: Remember Mark Twain's comment.

Let us be sensible. If we make a mistake in our decision as to whether the cancer cells are in the axillary glands or not, we may be forgiven. But once our decision is made we have no excuse if we use a procedure not dictated by common sense.

We decide the cancer is still localized in the breast and that no cells have been trapped in the axillary glands: Can there be any argument as to what should be done? Simply surround the town and wipe it from the face of the earth; that is, remove the entire breast. This is quite a sacrifice but it is better that one city should go than the whole nation be lost.

Now, if we could subject all the cells of the breast to some trying ordeal; we know the cancer cells or bolsheviks are the weakest and would die first: We might destroy the cancer with perhaps but slight injury to the organ. That is what radiation has tried to do and will some day accomplish. It has not been perfected to that degree yet.

You would remove the glands of the axilla in a case like this? What for? They are Nature's line of defense; and here is where the word "radical" comes in. It is regrettable that this word suggests and sounds like "eradicate". Of course, we want to eradicate the disease, but

not destroy our friends and only defenders, the axillary glands. Furthermore, you cannot remove all the axillary glands regardless of your skill; it cannot be done; they cannot all be found.

In a second case: Suppose the axillary glands appear to be involved by metastasis; How shall we proceed with treatment?

First we must make a definite decision: We may be mistaken but we must be definite. So we decide the glands are involved and are cancerous.

In this case we have to go further and make another definite decision: Has the cancer gone beyond the axillary glands to other parts of the body?

Again we may make a wrong decision but it must be definite. The chance for error in these definite decisions is very great and this alone invalidates to a large extent, even our present statistics as regards the efficiency of various methods of treatment.

However, we have decided this second patient has glandular involvement and that the disease has not gone beyond the axilla. Oh! This is a case for "radical" operation. Is it? Or do you mean an eradicating operation; there is a vast difference between the two.

If you mean an eradicating operation in this case, you will remove the entire shoulder along with the breast; also taking along with it the clavicle and all the vessels and nerves to the root of the neck. And unless you can produce this unheard of mutilation by a widespread incision and remove the whole in mass without breaking an infected gland or disrupting the lymph channels leading into the infected glands, then you will not eradicate but scatter the cancer cells to the four winds. There is no such operation as an eradicating procedure for this second case. Simple mammectomy was eradicating in the first case.

In this second type, since the disease cannot be eradicated by surgery from the axilla, we do what appears most rational at this time: Use deep roentgen ray, about one thousand R to the glands and do a simple mammectomy the next day. Two or three months later use roentgen ray again in the same or larger amount.

We use this same method in the first case without glandular involvement because we are never certain as to what is in the glands.

Now, a third case shows metastasis beyond the axillary glands; that case is hopeless. Any treatment is for mental effect.

We use the electrosurgical unit in all cancer of the breast surgery; it may or may not be advantageous; we think it is.

We handle the breast gently; never grasp it with volsella or other crushing instruments; remove it in mass along the fascia of the pectoral muscles but not the muscles.

This method, if our diagnosis is correct, gives one hundred per cent cures in the first group; Why not? It prolongs life and may produce a cure in the second group with gland involvement; and in both cases the mortality from treatment is zero and a normal arm is always preserved.

To be sure, my presentation has been simple, somewhat dogmatic, and purposely devoid of statistics. My real purpose is to raise the question of radical operation for cancer of the breast and condemn it.

The results from simple removal with pre- and post-radiation are convincing, and when our clinic shall have been in operation for five years and issue a full and comprehensive report, it will, in my opinion, convince any unprejudiced mind that our contentions are correct.

A STUDY OF GAS BACILLUS INFECTION, WITH SPECIAL REFERENCE TO ITS OCCURRENCE IN THE NEGRO*

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Even the most unthinking of surgeons must have been disturbed by the report published in 1932 by W. M. Millar, which showed that the mortality in 607 cases of gas bacillus infection collected in civil practice was 49.7 per cent, more than 1 per cent higher than the mortality for the same condition among the American Expeditionary Forces during the World War.

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*Read before the Louisiana State Medical Society, Lake Charles, April 27-29, 1936.

But the shock seems to have been a healthy one. The death rate is still far too high, but it has shown a distinct improvement, especially in recent years. It was 32.4 per cent in the 67 cases reported by Stone and Holsinger in 1934, it was 23.5 per cent in the 17 cases reported by Eliot in 1935, and in the 54 cases we are herewith reporting from the New Orleans Charity Hospital for the seven-year period ending in 1935 it was almost as low, 27.7 per cent.

In the series from Charity Hospital the racial distribution of both the cases and the deaths immediately attracts one's attention. Negroes furnish less than half of the hospital admissions, but 60 per cent of the cases of gas bacillus infection in this series occurred in that race. Even more important, 13 of the 15 deaths occurred in negroes, and the mortality among them, 40.6 per cent, was more than four times as high as the mortality among the white patients, which was 9 per cent. Such discrepancies we explain, as does Boland, by the theory that negroes apparently have a greater susceptibility to gas bacillus infection than white patients have. His studies show the incidence of the condition to be two and a half times greater among the negroes, and it seems clear that statistical studies from institutions in which there is a large negro population should be analyzed from this standpoint before judgment is passed upon them.

Males predominated, as they do in all reported series. The age limits were 7 and 64 years, and almost three-quarters of the total number of patients were under 40 years of age.

Table 1

Exciting Lesions

Compound fractures	17
Gunshot wounds	16
Crushing injuries	10
Secondary amputations after primary vascular gangrene	7
Chronic burn of thigh	1
Tooth extraction	1
Infected finger	1
Nail puncture foot	1

As table 1 shows the proportion of exciting causes is about what one would expect, with compound fractures, gunshot wounds and crushing injuries accounting for most cases. In this particular series there happens to be no instance of infection by way of a hypodermic needle, but I have observed such cases, and I was impressed in surveying the literature with the number of writers who call attention to this mode of transmission. Probably 50 such cases are now on record, and it is clearly evident that immersion in 95 per cent alcohol, which is a rather common practice, is inadequate and that some more rigid sterilization of such equipment should be adopted.

The earliest constant sign in this series was the rather sudden development of very severe pain, or the rather sudden exaggeration of preexistent pain, accompanied by local swelling and a sense of distention in the wound. Very frequently, as other writers have also noted, the patients asked that their dressings be loosened. After the onset of pain the whole picture of gas bacillus infection is always a sort of study in disproportion. The pulse rate is at first high in proportion to the degree of pyrexia, and later both the pulse rate and the temperature are increased out of all proportion to the local reaction. The pain is out of all proportion to the size and type of the wound. The constitutional reaction, particularly the shock and the profound toxemia, are out of all proportion to the local manifestations. In short, the textbook picture of gas bacillus infection, which stresses the characteristic khaki color, the crepitation, the typical sero-sanguineous discharge with gas bubbles, and similar findings, is a late and not an early picture.

Indeed, there are worse methods of diagnosing the condition than Ashhurst's. During the late War, when the American ambulances were so crowded that patients had to wait their turn for attention, it was his custom to wander up and down the corridor during his spare moments and actually smell the patients. Those who had a mouselike odor, or, who, as others put it, smelled like rotten meat, were given precedence of all other wounded, for the urgency of their state was realized. It was a crude method, and the finding is not entirely constant, but it undoubtedly saved many lives.

Six patients, of whom four died, entered the hospital with the gas bacillus infection already developed, and in seven others the data were

not sufficient to determine the time of onset. In the remaining cases the mortality for the 48 hour incubation period was 29.2 per cent, which is almost twice as high as the 15 per cent mortality for a longer incubation period, in this condition, just as in tetanus, the infection being the more virulent and the more fatal the shorter the incubation period. In a few cases of the fulminating variety, the infection developed and the fatal termination ensued within 48 hours.

Since the B. Welchii, the most usual strain of infecting organism, is anaerobic and feeds upon devitalized muscle, the basis of treatment would seem to be the removal of the pabulum upon which it feeds, and the introduction of oxygen, in the presence of which it must die. The first principle of treatment, then, is clearly a matter of prophylaxis. Whenever débridement, or the removal of devitalized tissue, is the routine treatment of lacerated and contused wounds, gunshot injuries and similar traumatic states, the incidence of gas bacillus infection will be reduced to a minimum. It did not develop in a single one, for instance, of the 236 compound fractures treated by this method and reported by Daland from the Massachusetts General Hospital. The difficulty is here, just as in tetanus, that the significance of a small injury is not always realized, while often the wound is so slight that extensive débridement seems a remedy worse than the disease. It is perhaps too much, therefore, to say that all wounds should be treated by extensive débridement. It is not too much to say, however, as Carothers suggests, that the circumstances of all such injuries should be carefully inquired into, and that precautions should be taken when they seem warranted. Like all infections, gas bacillus infection begins locally, and it should be controlled locally before it gets a head start.

Table 2

Mortality in Relation to Surgical Procedures*

	Cases	Deaths	Per Cent
Amputation	31	9	28.3
Incision and drainage	13	4	30.3
Débridement	10	1	10.0

*One patient died without treatment.

When once it has developed, what to do is another matter. On the surface, as table 2 shows, débridement would seem to have the best of the argument, though it is only fair to point out that frequently, when amputation is resorted to, it is because the condition is so extensive that the surgeon has little choice of procedure. Perhaps some of the patients who succumbed to amputation would have recovered with a less drastic operation. Perhaps some unnecessary amputations were done. There can be no rule of thumb, and such points cannot be determined merely by a study of records. The important thing to remember is that, whatever the procedure may be, halfway measures have no place in the treatment of this condition. If amputation be done, it must be well above the involved area. If incision and drainage be done, the incisions must be multiple and the drainage adequate for the discharge of the toxic secretion and the introduction of air. If débridement be chosen, it must be continued until healthy muscle is reached, as evidenced by color, free bleeding and contractility.

The so-called clean cases in which gas bacillus infection develops after amputation for nontraumatic states have recently received considerable attention, as they very properly should, for the mortality is appalling. It was 72.2 per cent in the 18 cases collected by Orr, and it was 100 per cent in this particular series. Quite characteristically, we migh add, six of the seven patients were negroes.

This question was studied very carefully by the New York Hospital for Joint Diseases and the findings of their committee are worthy of careful note. They are disinclined to accept as a cause either a break in technic or the use of contaminated suture material, though the latter was operative in 10 such cases reported by Eliason in 1933. They are disposed, on the other hand, to accept inadequate preparation of the parts, on the basis that the B. Welchii is a normal inhabitant of the human colon and can very easily be deposited about the operative site from the stool, especially in persons of uncleanly habit. This seems to us a particularly valid contention in negroes, whose unhygienic habits are notorious and who, in Charity Hospital, are huddled together in hopelessly overcrowded wards.

Another quite reasonable supposition, supported by my own positive findings in 90 per cent of such cases studied, is that the organisms find a site of predilection in poorly oxygenated tissues, as are all tissues in which the vascular supply is inadequate. They are resident on the skin and in the lymphatics in a large proportion of all cases of moist gangrene, whether diabetic or arteriosclerotic, and it is surprising, in my opinion, that they do not become activated even more frequently than they do.

I was not able to corroborate Manson's finding of the gas bacillus in my studies of varicose ulcers, perhaps because the ulceration in all my cases was superficial, but his results cannot be ignored. Stirred to his investigation by the development of fatal infection in two patients following the injection of varicose veins, he identified the organism in more than 34 per cent of his cases of chronic leg ulcers, while he could find it in the same region in only 7.6 per cent of normal patients. But the fact that that portion of supposedly normal patients harbor such an organism is very illuminating. Certainly it explains, at least in part, the high incidence of the infection in negroes, whose skin is frequently very unclean, and it shows, too, that it is always a possibility when the skin is broken, even without contamination by the soil, by wool, as pointed out by Gage, or by similar agents.

In view of the findings just mentioned, the prophylaxis of gas bacillus infection would seem to lie in the hyper-aseptic preparation for amputation which is advocated and practised in the New York Hospital for Joint Diseases. It is detailed and time-consuming, it is true, but against that disadvantage must be set its obvious effectiveness in cases in which gas bacillus infection is a possibility, and its employment is clearly warranted.

From the standpoint of treatment, in such cases, radical procedures, as this series shows, are of no value: re-amputation carried a mortality of exactly 100 per cent. Eliason's idea, that high amputation should be practised primarily, I am opposed to; the mortality is inevitably high, and the procedure is often unnecessarily mutilating, though I must grant that the Committee from the New York Hospital for Joint Diseases is disposed to share his opinion. My suggestion is a trial of more conservative measures, such as multiple deep incisions; I feel that nothing could be lost by such a plan, and propose to practise it, in combination with therapeutic doses of mixed antitoxin, when next I am faced with this problem.

There is still no uniformity of opinion concerning the value of the antitoxin treatment of gas bacillus infection, perhaps because the number of reported cases in which it has been used is still very small. I feel that it is of undoubted value and the figures in this series (table 3) bear this out.

Table 3

Mortality in Relation to the Use of Antitoxin

	Cases	Deaths	Per Cent
No prophylactic dose	27	13	48.1
Prophylactic dose	27	2	7.4
No prophylactic or therapeutic dose	5	4	80.0
Prophylactic or therapeutic dose	49	10	20.4

These figures may be analyzed from various points of view. Twenty-five patients, for instance, of the 39 who survived, had received prophylactic antitoxin, against only two of the 15 who died. To express it another way, there were two deaths among the 27 patients who had received the prophylactic antitoxin, a mortality of 7.4 per cent, while there were 13 deaths among the 27 who did not receive it, a mortality of 48.1 per cent. Furthermore, in the group of 10 patients treated by débridement, all of whom received prophylactic antitoxin, there was only one death, and this patient was almost moribund when he was first seen.

To continue the analysis from still another angle, there were four deaths among the five patients who did not receive therapeutic antitoxin, a mortality of 80 per cent, while there were only 10 deaths among the 49 patients who did receive it, a mortality of 20.4 per cent. In the latter group there were included one patient who was moribund on admission and two others who died of pneumonia 9 and 10 days after admission, with their infection fully controlled. Such deaths are included in the mortality, of course, but can scarcely be charged against the method of treatment.

An analysis of this sort naturally does not show the other side of the picture, the numerous cases in which prophylactic antitoxin was given and in which gas bacillus infection did not develop, though all the circumstances were favorable for its growth. Such results would seem to warrant routine administration of the antitoxin in all suspicious cases, as tetanus antitoxin is used. It must be granted that it is expensive, and whether the expense would be too great for its routine use is a matter that hospital authorities must decide. Of its effectiveness as a prophylactic, however, there can be no doubt, just as its therapeutic value seems equally beyond doubt. It is not a measure that should supersede surgery, but certainly it is one that should complement it. My opinion is that in the prophylactic and therapeutic use of antitoxin, combined with the surgical measures indicated in the individual case, lies the solution of the problem of the shocking mortality which hitherto has seemed inseparable from gas bacillus infection.

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DISCUSSION

Dr. Guy A. Caldwell (Shreveport): I think this is a tremendously important subject. We had occasion to review the deaths from gas gangrene in the Charity Hospital at Shreveport this spring, the deaths that occurred in the past two years, and the cases of gas gangrene that recovered.

It is a difficult matter to approach this subject and try to determine the efficacy of serum or antitoxin. I think we have to be a little bit guarded in the attitude we take toward it, because the surgical treatment still remains the basic treatment. As the doctor said, the use of the antitoxin cannot supersede surgery. Unquestionably, enough statistics have been submitted, and his own statistics here show that it is a valuable adjunct, and yet we cannot feel that the giving of the antitoxin is anything like as effective in gas gangrene as tetanus antitoxin is in tetanus. I think all figures concerning the efficacy of the antitoxin must be coupled and considered with what surgical measures were done.

When we say a débridement is done, we have not told the whole story. There are débridements and débridements. Then some seem to have the idea that a débridement can be done where you expect or anticipate gas gangrene, and close the wound.

In our group of cases it was very definitely shown that every case that had a débridement followed by a closure, whether or not it had prophylactic antitoxin, developed gas gangrene and subsequently had to be amputated, and several of them were lost. So the thoroughness with which the débridement is done and, above all, whether or not it is left wide open is, to my mind, the controlling and first factor in the situation. Unquestionably, it is of value again to use the antitoxin in conjunction with it.

With regard to the development of gas gangrene in elective amputations, several of those cases occurred in our hospital and I did not tabulate those. I thought perhaps it would be confusing to put it in the same group. Personally, I have the feeling that the reason it develops is not because of improper technic. I happen to know that several of these cases that did develop gas gangrene were very carefully prepared and were very carefully done. But I do believe that the infective organism is present in the lymphatics and that sufficient trauma is done to the muscle to create the medium, one which grows at the amputation site, and invariably these stumps will close. A cigaret drain or rubber tissue drain is no drain at all for gas gangrene, and they will invariably close and a number of them develop gas gangrene. I have the feeling that we should treat most of those chronic ulcer cases, and particularly those with deficient circulation, as we would a case that had a compound fracture with dirt and contamination, namely a guillotine amputation modified perhaps by making the bones considerably shorter and leaving it open. I have done that on my service in several cases, and surprisingly close to wound in a diabetic case, and got away with it perfectly well.

I do think we must take another slant on the

question of amputation in such cases as that and look on them as potential gas gangrene cases, and treat them as such by using perhaps the more radical amputation.

Dr. A. S. Hamilton (New Orleans): Dr. Veal has emphasized the racial and sexual distribution in the incidence of gas bacillus infection. There is another point in the etiology that I think should also be emphasized, and that is the geographical distribution.

We have found that the vast majority of our cases of gas bacillus infection are cases which come from the country. They are compound fractures which are sustained on the open road or in barnyards, where we might expect to see a large number of the B. Welchii. In the city, on the other hand, we rarely see a case of gas bacillus infection following compound fracture whether they have had prophylactic serum or not.

Another point that I think should be emphasized is the tissue on which the gas bacillus grows. When we are doing the débridement we do not worry so much about the skin, we do not worry about the subcutaneous tissue, we do not worry about the bone; our débridement must be particularly concerned with the muscle tissue, and all the muscle tissue which is relatively avascular and non-contractile must be excised.

Dr. Isidore Cohn (New Orleans): There is one point I should like to stress in connection with Dr. Veal's paper and that is the necessity for prophylactic use of the serum. Everybody is satisfied that they should use prophylactic anti-tetanic serum, and yet when we talk to the same group about using the combined serum they will do what Dr. Veal said just now, discuss the question of expense. Expense should be absolutely no item when a life is at stake, and if its costs fifty cents or a dollar more to give the serum, that is not very much if you save that life with that dollar. If life is that cheap, it is not worth anything at all. If a prophylactic serum is of any value, the time to give it is immediately. Do not wait.

Dr. Veal mentioned the series from the Massachusetts General. You will find a good many men who say they have had no cases. I found that same thing in a meeting of the Fracture Committee of the American College of Surgeons a few years ago, when I tried to get the group to advocate the use of the prophylactic combined serum, gas-tetanus instead of just the straight tetanus. The men in the large industrial centers said they never see it. For instance, Sherman in Pittsburgh said that they do not have gas infections in coal mines. It is true that we find more of it in agricultural districts than we do in large industrial centers. I believe it should be a routine that wherever anyone thinks tetanus serum is indicated that gas-tetanus serum should be used.

Moreover, I believe, as Dr. Caldwell and Dr. Veal have emphasized that it is important that these wounds should be débrided and should be left open. If we believe that anaerobic conditions are favorable for these organisms, and that they live on dead and dying tissue; we can most effectively combat their growth by leaving the wound open.

Another thing that I think is important if you are going to do débridement, see that it is done adequately. If you are going to do anything, make incisions and excise all the muscle which shows evidence of involvement. The only way you can tell that is not only by the color and by the odor, but by the fact that the muscle either contracts or does not contract. An ordinary artery forceps pinching the muscle will tell you whether it contracts or not.

I believe, further, that the use of serum in a curative way has a definite value, but if one uses it he has to realize that it has to be given extremely slowly and must be given at body temperature.

Dr. Veal's statistics are extremely interesting and valuable, showing exactly what can be done in competent hands and where a man is particularly interested in the subject. Dr. Veal's work has been tremendously important in encouraging men to do better work along those lines.

Dr. J. Ross Veal (New Orleans): I am gratified to note that the whole trend of this discussion has been toward the prevention and early treatment of gas bacillus infection. Those were the main points which I wished to bring out in my paper.

It should be emphasized once more that this type of infection begins locally and should be treated at this stage. If the organisms are controlled when they are first implanted in the tissues, before they have time to develop, the mortality of gas bacillus infection will be very low. Toxemia is the chief cause of death, and it can be prevented by prompt treatment.

THE TRANSFUSING OF BLOOD

W. G. ALLEN, M. D.
and
L. H. MURDOCK, M. D.
CONVERSE, LA.

Although the use of blood transfusions is finding an ever widening field in almost all branches of medicine, many are still very reticient about taking advantage of what is probably the greatest addition to our therapeutic armamentarium.

Many references are made to transfusion of

blood in the writings of "those mighty masters of antiquity who first discovered the principles of things." The Egyptians are believed to have limited its use to the healing of their princes. Transfusion was acclaimed with enthusiasm by many three hundred years ago. Physicians, poets and philosophers considered it an infallible means of overcoming what a certain grim humor has called "that terrible disease, extreme old age," and believed then to be the long sought "fountain of youth" or means of regeneration.

The decline of this enthusiasm naturally followed after the death of Pope Innocent VIII and three youths used as donors in an attempt by a Jewish physician to rejuvenate the aged Pope by their blood. It is believed that the blood was given by mouth.

Following Harvey's description of the circulation more successful efforts were made to perform transfusions, and Richard Lower, in 1666, is credited with having given the first authenticated successful transfusion to animals. The first known successful intravenous injections in man were made by J. D. Major in 1664, and he was probably the first to give successful blood transfusions to man, for he is known to have transfused his former teacher Dr. Michaelis, of Leipzig, in 1666. J. Denis, Doctor in Medicine, Professor of Philosophy and Mathematics, in 1667, described his transfusing a 17 year old youth suffering with a fever of two months duration; nine ounces of arterial blood from a sheep "restoring him from a moribund state, after having had twenty venesections previously, with entire and almost immediate success."

Thus Dr. Denis describes two other successful transfusions. The first successful transfusion in man given in England was by Richard Lower and Edmond King, who transfused more than nine ounces of sheep blood into the vein of a man who, "after the operation, as in it, found himslf very well."

The Edict of Chatelet, 1668, forbade transfusion of man following a church medicine controversy at which some bad results were reported. No worthwhile work was done following this until Blundell in 1818 demonstrated its practicability and gave it prominence in his obstetrics book as a restorative measure in puerperal hemorrhage. He demonstrated successfully a syringe method and the life saving efficacy of small transfusions of blood comparable to the amount of blood lost.

The multitude of more recent works and workers are less interesting yet better known and of the greatest importance in presenting to the practicing physician of our day the several practical ways of administering this nearest approach to a panacea. Shattuck, Brewer, Leggett, Carrell, Crile, Unger, Kimpton and Brown are names that stand out prominently in this endeavor.

Far from the vein to vein, or vein, canula, vein procedures, very intricate mechanisms were evolved. These were very difficult to operate, but with step by step improvement very simple, easy to operate apparatus are now available.

There were two other problems that necessarily had to be solved before transfusing of blood could be accepted as a safe therapeutic measure. Shattuck in 1899 recognized the presence of iso-agglutinins in the blood; Landsteiner showed that they existed independent of health or disease and followed definite laws. This explained why some transfusions were given with no reactions and others with mild to fatal reactions immediately following. He reported the groupings which Jansky and Moss confused by not numbering their groups in the same way.

Blood matching or typing as well as the cleansing and sterilizing of all apparatus have received much attention from many able and now famous workers. These, also, have been mastered to the point of simplification and have been relegated as stereotyped procedures to the realm of technicians and nurses in the larger institutions. However this work is not fool proof as will be noted upon investigation of the records on transfusions given in the large hospitals. They should be rigidly supervised to avoid any untoward results bearing the taint of carelessness or lack or skill.

Among most practicioners there is an apparent lack of appreciation for the great number of indications for this life saving measure or a failure to realize the facility of mastering, de-

spite its essential exactness, the entire procedure. In the hospital we are prone to use it only when in dire need or as a last resort and therefore often too late; while in many cases, never hospitalized for one reason or the other, and treated in the home, a few hundred c.c. of transfused blood would be a life saving measure when nothing else could be of any avail. Indications for blood transfusions are well discussed by J. D. Hamer and F. H. Chafee.

We are not urging those not versed in the technical points to attempt the procedure, in fact this is strongly advised against. The entire technic can readily be mastered. However, each detail should be learned under supervision and by demonstrations.

Brines states that, "inserting the needles is the most difficult part of the procedure," yet there is much of the greatest importance that precedes this. The great value of a rigid exact technic is shown by a comparison of post-transfusion reactions in two hospitals. Lewisohn reduced the number of post-transfusion reactions at Mount Sinai Hospital from 23.9 per cent to 0.7 per cent by changing the method of cleansing and sterilizing the apparatus used. De Bakey reports only one mild reaction in 500 transfusions in a hospital using student nurses and student technicians.

We will summarize a few helpful points that we have gleaned from the literature and experience.

SUMMARY

In urgent cases there is no need of determining agglutination of donor's serum on repicient's cells as there is such dilution when given that little or no reaction follows.

A white cell diluting pipette drawn to 0.5 with blood and using .02 per cent citrated saline solution as diluent furnishes an ideal cell suspension.

The cuff of a sphygmomanometer serves as an excellent tourniquet for the donor, more especially so because a definite pressure may be maintained. Keeping the pressure at 50 m.m. mercury holds it well above venous pressure of 30 and well below arterial pressure.

Cold agglutinins, a normal phenomenon, noted at low pressures and pseudoagglutination recognized microscopically by rouleau or clump formation may cause one to discard a compatible donor.

The concavity of ground glass slides allows a quicker, neater test for agglutination than does the usual vaseline mount. Cover glasses are necessary to prevent drying out during thirty minutes observation.

A certain way of cleaning new or used apparatus is to separate all parts and wash with tap water. They are then washed in a dilute solution of green soap to which compound solution of creosol has been added to make up about a 1 per cent solution; pull a small brush through all openings and tubing. Now boil both metal glass and rubber parts in 0.1 per cent sodium hydroxide solution for four minutes, remove sodium hydroxide with tap water, wash all parts well with triple distilled water. Assemble and sterilize in special bundles in the autoclave.

NEW ORLEANS
Medical and Surgical Journal

Established 1844

Published by the Louisiana State Medical Society under the jurisdiction of the following named Journal Committee:

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News material for publication should be received not later than the twentieth of the month preceding publication. Orders for reprints must be sent in duplicate when returning galley proof.

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Manuscripts should be addressed to the Editor, 1430 Tulane Avenue, New Orleans, La.

POST GRADUATE MEDICAL ASSEMBLY

Last month's number of the New Orleans Medical and Surgical Journal published a detailed program for the coming meeting of the New Orleans Graduate Medical Assembly which will be held March 8-11. A perusal of this program will indicate to the reader that the opportunity will be afforded of hearing outstanding men in their specialty. It is not often that a chance is given to hear in one day speakers and physicians of the caliber of John A. Kolmer, G. G. Ward, G. M. Piersol, L. J. Pollock and H. J. Stander and Hugh Trout, to pick at random the program for one day. The other day programs are equally characterized by the presence of a group of magnificent clinicians and specialists. In addition to the scientific program it must not be forgotten that the annual spring fiesta is to be held in New Orleans at this same time. This should be a big attraction for the wives who may come with their husbands. The entertainments that are going to be held do not appear on the official program but they promise to be many and to be interesting. Altogether a well rounded four days of social and medical activity can be promised for the attendance of this, the first of what is hoped to be many subsequent similar gatherings.

AMERICAN MEDICAL ASSOCIATION DIRECTORY

One of the most important undertakings of the American Medical Association is the issuing every two years of a directory of the physicians of the United States, of the dependencies of the United States, of Canada as well as for the first time this year a list of American physicians in foreign countries. With each man's name is stated very briefly the important details of his age, school and date of graduation, his specialty, societies to which he belongs and other relevant data. In this way more than 185,000 doctors are adequately catalogued. In addition to this material which makes up the bulk of the volume there is a part which deals with national and inter-state information, with such important matters as a list of recognized medical schools and their history; examining boards and medical libraries and journals; officers of the medical services of the Government, of medical societies, and so on. The physicians in the third section of the book are arranged alphabetically, so if their location is not known, they may readily be located. Lastly there is a list of physicians who cannot be found. The small size of this last list shows definitely that the directory was made possible by the cooperation of the great majority of the doctors in this country.

All in all this fourteenth edition of the A.

M. A. directory reflects credit on the American Medical Association. It is a volume of inestimable value and while the continued use of the directory might not be necessary for the great number of practitioners, nevertheless nearly every doctor needs it from time to time and has to refer to it. To the doctor who has to refer to the directory many times, it is absolutely essential that it be in his office.

STUDIES OF HEART DISEASE MORTALITY

A very pertinent analysis of the accuracy of deaths ascribed to heart disease occurring in Washington, D. C. during 1932, has appeared from the pen of O. F. Hedley.* The author first discusses the inadequacy of the official method of recording heart disease in the light of modern clinical concept of disorders of this organ. Nowadays it is customary to make a complete diagnosis of a heart condition which is present in a man suffering from this type of disease. It is conceded that the first and most important fact is the etiologic diagnosis. The anatomic diagnosis then follows and, for the living, functional diagnosis is further added. There is no possibility, under present conditions, of recording deaths from heart disease according to the fundamental cause. The same statement applies often to diseases of the blood vessels. Thus syphilitic heart disease or syphilis of the aorta cannot be listed because syphilis will be assayed as the cause of death and no record will be made of the fundamentally important heart and vascular condition.

Another marked discrepancy in diagnosis on death certificates has to do with frequency with which it is perfectly obvious, judging from the records, that the patient did not die of heart disease. Of course it may be conceded that the patient did die because the heart stopped, but that is no reason for certifying death as being due to such a condition as myocarditis or myocardial degeneration as are nearly 50 per cent of heart disease patients listed when they die. Myocarditis is a vague, indefinite, improper term. In the majority of instances it is dependent upon change in the vascular system of the heart. Hedley found that apparently when a cause of death could not be definitely determined heart disease was the diagnosis, and he substantiates this observation in his study of a relatively few death certificates, by listing 71 deaths ascribed to heart disease and so reported but which were due to other conditions as proved by autopsy in approximately half the cases.

As result of certifying heart disease as a cause of death merely because it is a convenient term, a tremendous number of deaths are improperly and imperfectly reported, but on the other hand there are a considerable number of patients who die from heart disease who are not listed as such because of the inadequacy of the required cause-of-death standards. The statistics on heart disease producing death most certainly can be looked upon with a great deal of skepticism. Surely it is not as frequent a cause as is very generally maintained. Although differences occur one way or the other there are apparently very many more deaths listed as heart disease than deaths which should have been listed as such.

Dr. Hedley is not only forceful in his criticism but is most constructive in his suggestions for the improvement of the recording of heart disease. He would have always the etiologic diagnosis put down plus the pathologic; thus, syphilitic heart disease—aortic valvular insufficiency. This can be interpreted properly and affords a basis for the right type of statistics. If there is any question about the diagnosis he would have the cause of death ascribed to sudden death, or cause of death not specified or ill defined. Thus there would be weeded out from the statistics the erroneous labeling of disease entities on inadequate data. Lastly, he urges, when the times comes for the revision of international list of causes of death that heart disease should be specified along etiologic lines.

*Hedley, O. F.: Studies of heart disease mortality, U. S. Pub. Health Bulletin No. 231, 1936.

HOSPITAL STAFF TRANSACTIONS AND CLINICAL MEETINGS

J. T. NIX CLINIC
NEW ORLEANS

At a meeting held in January the following paper was presented by Doctor Ruth G. Aleman.

BANTI'S DISEASE; PRESENTATION OF A CASE

The presentation of a single case of Banti's disease may be justified on the ground that the patient is here in the hospital, has had splenectomy, and is making a very satisfactory recovery.

Banti's disease is usually seen in the comparatively young and runs a fatal but rather slow course with death from infection or hemorrhage. The symptoms may be divided into three stages: anemic or preascitic; intermediary; cirrhotic with occasional jaundice, followed by increased anemia, emaciation, exhaustion, fever and cardio-renal changes. The diagnosis must be made by exclusion, considering the age of the patient, the leukopenia and the chronicity. It is to be differentiated from Gaucher's disease, which shows a very large spleen with early anemia; from Hanot's cirrhosis, which is associated with jaundice, greater splenomegaly with abdominal crisis and leukocytosis; from pernicious anemia; the aleukemic stage of leukemia; Hodgkin's disease and hemolytic jaundice. Pernicious anemia and leukemia show characteristic blood-changes. Hemolytic icterus has discoloration of the skin as one of the earliest symptoms and is distinguished by the increased fragility of the red blood corpuscles. Syphilitic enlargement of the liver and spleen may also closely resemble Banti's disease; but there are usually the evidences of syphilis in the past history or the present condition of the patient.

Here is the story of this case: A boy, five years old, appeared for examination preliminary to tonsillectomy. He had had measles, whooping cough, chicken pox and mumps. His tonsils were enlarged and definitely diseased, his teeth were carious, his lungs showed bronchitis and his spleen was palpated one finger below the costal margin. The blood picture was normal. The tonsils were not removed at this time because of the existing bronchitis.

Three years later he came in for nose-bleed and was given a thorough examination. His spleen was then three fingers below the costal arch and his blood picture was that of secondary anemia. He was given 657½ milligram hours of radium over the spleen. The following year his examination showed the spleen: about the same; the heart: a systolic blow over the second left interspace; blood pressure: 95/58; lungs: negative. His Wassermann was negative and his blood picture was about the same; coagulation and bleeding time were normal. Since his tonsils were still diseased tonsillectomy and adenoidectomy were done and the patient made an uneventful operative recovery. He was given 953¾ milligram hours of radium over the splenic area. During the ensuing year he had 593 milligram hours of radium and spent a fairly healthy year. At the next examination, about one year later, his total white count had gone down to 3,000 with a hemoglobin of 45 per cent. He began to complain of fatigue on slight exertion and his skin was of a peculiar yellowish color. The mucous membranes were pale. During the two ensuing years he received 104¼ milligram hours of radium over the spleen.

When examined, one month ago, his spleen had enlarged to a hand's breadth below the costal arch, two inches to the right of the midline. The liver was palpated two fingers below the costal arch. The blood showed: Total white, 7,000; neutrophiles, 52; small lymphocytes, 40; large lymphocytes, 8; total red, 2,190,000; hemoglobin, 40 per cent. There were anisocytosis, poikilocytosis, pessary forms. Coagulation and bleeding time were normal.

The boy was hospitalized in the early part of September, the lowest counts being 2,150,000 red cells with 5,000 white cells, and hemoglobin, 45 per cent. Three whole blood transfusions of 99, 300 and 250 c.c. were given preliminary to operation. The operative procedure was that usually followed for splenectomy. The splenic vein was ligated as the last step in the operation in order that as much blood as possible might return to the circulation. On the seventh day of post operative treatment his total red count rose to 3,810,000 with a hemoglobin of 70 per cent and a total white of 10,000.

The following is the pathological description of the spleen:

Gross: Spleen measures 22 cm. in length, 12 cm. in its greatest width, and 7 cm. in its greatest thickness. It is of normal outline. The outer surface is generally smooth but here and there shows the presence of shallow fissures on the convex surface which are often marked by irregular yellow splotches which contrast sharply with the normal purplish red of the spleen. The organ is rather soft in consistency. On section, the surface is dark purplish red in color, trabeculae are fairly prominent. The Malpighian corpuscles can barely be seen, the pulp scrapes with some difficulty. The surfaces are moist in appearance and small irregular markings of a light yellow color are found here and there.

Final diagnosis: Splenomegaly. (Banti).

Summing up this case, it may be said that this

represents a fairly classical case as described by Banti:

(1) A well marked splenomegaly; (2) a beginning cirrhosis of the liver with marked anemia. The patient apparently improved a great deal after splenectomy.

TOURO INFIRMARY

The annual meeting of the Medical Staff of Touro Infirmary was held Wednesday, January 13, 1937, at 8 p. m., Dr. Urban Maes presiding.

As is the custom, Dr. John A. Lanford directed a clinico-pathological conference on two cases. The first was a case of tuberculous meningoencephalitis with many interesting unusual aspects. Drs. Holbrook and Lemann discussed the outstanding features, and slides of sections were projected upon the screen for demonstration. The organs were displayed.

The second case shown was one of carcinoma of the head of the pancreas with extensive involvement of the liver, without jaundice. Drs. Rives, Weinberger and Lemann entered into the discussion. Gross and microscopic pathology of the carcinomatous process were demonstrated.

There then followed a case report demonstrating the effect of heavy pavaex therapy in advanced peripheral vascular disease by Drs. S. Copland and M. Kaplan. Drs. Palmer and Crichlow discussed the presentation.

Dr. J. W. Tedder spoke briefly but fully upon the skin manifestations of Hodgkin's disease. Dr. Howles added to the subject.

Dr. Urban Maes reviewed the activities of the Executive Committee during the year.

The staff then voted upon nominations for election of two members of the staff to the Executive Committee. Drs. Urban Maes and J. D. Rives were chosen.

Following the meeting, refreshments were served in the dining room.

FRENCH HOSPITAL

A regular meeting of the French Hospital Staff was called to order Friday, Jan. 8, 1937 at 8:00 p. m., with Dr. Gordon presiding.

The interesting deaths of the month were discussed. Dr. Ciolino, in the absence of Dr. Stadiem, discussed the case of a two year old child, whose diagnosis was influenzal meningitis. The duration of the illness was only thirty hours and the first spinal puncture showed no micro-organisms, but B. influenzae was present in the second and third specimens.

Dr. Harris explained the possible severity of B. influenzae.

Dr. Palermo stated that the child complained of an earache and had an acute tonsillitis and adenoiditis three days prior to admission to the hospital. Although there was no pus or frank evidence present, he explained the possibility of such a type of infection originating in those areas.

Dr. Graffagnino explained the case of one Mrs. M. T., aged 42, diagnosis post-abortal septicemia. Prontosil, the much discussed medication for streptococcic infection, was used in this case and the interesting factor was that for two days no organisms were found, but again appeared and were present throughout until the patient's death. In the discussion of how, if possible, to stop criminal aborting, Dr. Graffagnino explained that the law is "only the person on whom the abortion was performed can testify against the abortionist." He stated that while such a law exists the stopping of such an act seems quite futile.

Dr. P. Graffagnino presented a paper on "The Endocrine and its Connection with Gynecology and Obstetrics." In abstract his talk was as follows:

1. Reproduction:
   (a) Double functional potentially of sex gland.
   (b) Periodicity.
   (c) Sex specific, not species specific.
2. Menstruation:
   (a) Uterine bleeding, such as Schroder, Gebhord, Corner.
   (b) Menstrual cycle—estrin, progesterone.
3. Organotherapy:
   The reasons for unfavorable results:
   (a) Threshold for effectiveness.
   (b) Threshold of response.
   (c) Lack of effect of gonadal hormone on glands.
   (d) Lack of effect of power of self regulation.
   (e) Pituitary activity modified—gonadal hormone and vice versa.
4. Indications for therapies:
   1. Amenorrhea—endocrine type.
      (a) Pituitary.
      (b) Thyroid.
      (c) Gonad.
   2. Sterility.
   3. Primary dysmenorrhea — endocrine type. Indications for progesterone and antuitrin S.—
   4. Habitual abortion. Indications for progesterone—
   5. Functional uterine bleeding. Indication for progesterone and antuitrin S.
   6. Vaso-motor menopausal symptoms.
   7. Gonorrheal vulvovaginitis in children.
   8. Senile vaginitis.
5. Diagnosis:
   1. Pregnancy test.
   2. Female hormone test.

(a) Blood.
(b) Urine.

3. Pituitary hormone test.
4. Ovulation test.

Dr. Graffagnino closed his paper with the statement of the possible dangers of the use of endocrine unwisely and stated that the only safe substance to date is the corpus luteum group.

Drs. Zander, Harris, and Ader expressed the great importance in the possibilities of endocrines in other fields.

The invitation for open discussion for any suggestions of how to improve and better the hospital was brought up. Dr. Palermo stated a reason for lack of patronage is the fact that the hosital does not belong to the Group Hospital Association and made the suggestion that the Executive Committee have a special meeting with the Board of Directors of the French Society and explain to them the advantages of this Insurance Association. This was seconded by Dr. Ader and Dr. Gordon stated that he would have an answer from the Board for the next meeting.

Dr. Zander suggested that a circular letter and self addressed envelope for any suggestion of how we may better the hospital at large be sent to all members and they may return them without signing their names.

The application of Dr. Di Bartolo was presented and given to the Membership Committee for approval.

A. J. Rando, M. D., Sec.

MERCY HOSPITAL

Mercy Hospital started the year 1937 in a glorious way at its recent meeting of the Staff on January 6.

The meeting was called to order by Chairman Dr. George Hauser, and then the staff listened attentively to an address by Dr. Hauser who reviewed the year's activities of the hospital and made several suggestions to the new officers for the coming year. The new officers were placed in office: Dr. John Dicks, succeeding Dr. George Hauser as chairman; Dr. J. J. Irwin, succeeding Dr. E. L. Zander as vice-chairman; Dr. R. A. Oriol, succeeding Dr. W. J. Otis as treasurer; and Dr. H. Ashton Thomas, succeeding Dr. Lloyd J. Hanckes as secretary.

The scientific program was dispensed with to allow all members present to participate in a banquet given by the Sisters of Mercy to the staff. There were approximately one hundred doctors at this feast extravaganza which means that just that many enjoyed themselves to the utmost. Dr. Geo. Hauser acted as toastmaster and his introduction of members brought considerable enjoyment to those present.

The Staff was treated by talks from several members of the Advisory Board, Mr. John X. Wegmann being the speaker of the evening and Mr. Albert Stewart, Mr. Paul Andry, and Dr. E. L. Leckert supplementing his talk.

The banquet was climaxed by a short talk by the in-coming chairman, Dr. John Dicks, who told the members of his plans for 1937.

H. Ashton Thomas, M. D., Sec.

HOTEL DIEU

The regular monthly meeting of the Staff of Hotel Dieu was held on Monday, December 21, 1936 at 8:00 p. m., in the Nurses' Lecture Room of Hotel Dieu.

The meeting was called to order by the President, Dr. E. H. Walet, and with the Secretary, Dr. J. A. LaNasa, at the desk.

The Scientific Program consisted of:

"Symposium on Hematology"

a. "Blood Dyscrasias—Practical Differential Diagnosis"—Dr. C. J. Tripoli.
b. "Certain Therapies in Blood Dyscrasias"—Dr. S. C. Jamison.
c. "Surgery of Splenic Disease"—Dr. J. T. Nix.

A recess of one minute was ordered by the Chairman after which the meeting resolved into Executive Session. The meeting was then adjourned.

SCHUMPERT SANITARIUM

The Schumpert Staff was called to order at 8 p. m. on December 8, 1936 by the President, Dr. T. J. Fleming, after a very delicious turkey dinner. Thirty-one members were present. The minutes of previous meeting were read and adopted. Upon the motion of Dr. Clarence Webb, the membership of Dr. N. G. Bender was accepted upon the approval of the membership committee.

The scientific program was next. Dr. B. C. Garrett read a paper on "Brain Abscess with Herniation," which was demonstrated by pictures and x-ray films. This case was a boy about eleven years old, who had been struck on the head by a small piece of pipe, which was very interesting from a neurological standpoint as this little patient was in the hospital four months and finally succumbed. This paper was discussed by the following Doctors: D. L. Kerlin, D. H. Alverson, W. R. Harwell, and W. L. Atkins.

The next paper was "Trichinosis" by Dr. R. B. DeLee. This paper was well presented and demonstrated by lantern slides, showing the parasites in the tissue. This was discussed by the following Doctors: H. G. F. Edwards, H. B. Wren, J. D. Youman, George Wolfe, and W. H. Browning.

Due to the lateness of the hour the paper of Dr. Clarence Webb on "Nephritis" was postponed until the January meeting. Dr. Fleming informed

the staff of some new equipment that the Sanitarium has recently installed, also called attention to the new nursery for the new born babies, and the proposed plans of installing a pediatrics department on the first floor.

W. L. Atkins, M. D., Sec.

SHREVEPORT CHARITY HOSPITAL

On December 15, 1936, the following members of the Hospital Staff enjoyed an unusually delicious turkey dinner: Drs. Bill Browning, Geo. H. Cassity, J. A. Wilkinson, R. B. DeLee, H. P. Blandino, N. Balistrella, Dudley R. Isom, Clifford W. Crain, J. D. Youman, Harold G. F. Edwards, Leon F. Gray, Chas. R. Gowen, E. L. Sanderson, M. D. Hargrove, W. J. Craig, W. M. Scott, C. H. Webb, C. B. Erickson, P. W. Winder, A. Jerome Thomas, R. H. Worley, J. Corrigan, P. D. Abramson, E. Wenk, W. S. Atkins, F. Burton, W. B. Worley, Bruce Crew, C. R. Mays, N. J. Bender, W. R. Mathews, J. S. Shaven, H. W. Boggs, E. T. Chandler, J. R. Stewart, R. T. Lucas, W. E. Crumpler, Jr, L. M. Vaughn, O. L. Sanders, T. M. Oxford, T. E. DePriest, W. S. Terry, Jr., and C. H. Potts.

After dinner the scientific program was held in the assembly room. The minutes of the previous meeting were adopted as read, and Dr. Boggs gave an interesting follow-up on the case of possible ruptured gastric ulcer which was presented at the last meeting. Although no diagnosis has as yet been made, it is now apparent that the pathology in this case is in the thorax, and not in the abdomen as was previously supposed. Further developments in this case are to be reported at a subsequent meeting.

Dr. Sanderson thanked the staff for its splendid cooperation throughout the year, and pointed out that many improvements have been added to the hospital, among these being an increase of three hundred beds. But he reminded the staff that, unfortunately, the financial growth of the hospital has not been proportional to its growth in size. Certainly this is an added incentive for the strictest economy on the part of the members of the Staff.

The following hospital report for the month of November, 1936, was read by the Secretary:

Admitted	1717	
Discharged	1755	
Deaths	92	
Autopsies	17	or 18.5%
Births	115	
Operations	782	

New business: Dr. Oxford bemoaned the fact that attendance to these meetings is as poor as it has been. He pointed out that with the wealth of material in this hospital, which is equalled by few and surpassed by no other hospitals, the attendance and interest in these meetings should be much greater than it is. Dr. Oxford believed that the primary cause for this lack of interest is the type of programs presented in the past. It was his opinion that in planning the programs, too much emphasis has been placed on the unusual and bizarre, and suggested that in the future the program committee should outline its programs months in advance, and that the program should be composed of summaries and statistical evaluation of the more common diseases, using large numbers of cases for material. Dr. Oxford believed that, if such programs are worked out, they will be much more enthusiastically received, with a consequent increase in attendance. Dr. Abramson remarked that in the past this very scheme had been attempted, and agreed with Dr. Oxford that in theory this type of program has many advantages, but in practice it was far from what was desired. He pointed out that only very occasionally was it possible to find a member of the Staff who had either the time or inclination to contribute to such a program. Dr. Gowen, the Chairman, appreciated these remarks, and assured complete cooperation of the program committee in presenting the best possible programs in the future.

Dr. Hargrove presented the first of two cases, that of a 60 year old white male, who, for three years, had been troubled with substernal pain on exertion. The pain did not radiate, and was relieved by rest. Prior to admission, an attack more severe than previous ones occurred, and for the first time pain was referred to the shoulders and down the left arm. On admission, this man's temperature was 100°, white blood cells were 10,000, with 8 polys, Wassermann negative, blood pressure 150/100. Physical examination of the heart and peripheral vessels showed no significant changes from the normal but the electrocardiographic tracing was characteristic of coronary occlusion of the posterior coronary artery. The diagnosis was coronary occlusion.

The second case was that of a 63 year old negro male who had suffered for some months with substernal pain, choking sensations, and some dyspnea. These symptoms also were relieved by rest, but at times attacks of nocturnal dyspnea were experienced. In this case the physical examination revealed a greatly enlarged heart with blowing systolic and diastolic murmurs over the precordium. Fluoroscopic examination was typical of the heart of aortic regurgitation. The electrocardiographic tracing was similar to the one in the preceding case, but the diagnosis here was luetic heart disease with aortic regurgitation and possible aneurysm. Dr. Hargrove pointed out that in many ways the symptomatology of these two cases was similar, in that the predominating symptom, pain, was substernal in character, and was relieved by rest. He next discussed the pathogenesis of pain in these two types of cases, and recalled

that the pain in the first case was due to ischemia of the heart muscle, resulting from the decreased diameter of the coronary artery, and pointed out that the pain in the second case resulted from one or more of the following factors: (1) Aortic regurgitation with resulting reduced coronary flow or (2) increase in the size of the heart, without proportional increase in the coronary bed or (3) mechanical obstruction due to the abnormal luetic aortic valves or the extension of the luetic process to involve the ostia of the coronary arteries.

Treatment: Case 1 responded very well to bedrest, sedatives, and a low caloric intake. This last factor in treatment is important, because of the consequent lowering of the metabolic rate, and reduction of amount of cardiac labor. Case 2 responded fairly well to rest in bed, sedatives, and a mild anti-luetic treatment, which should consist first in mixed treatment, and later the careful administration of bismuth in small ascending doses.

Prognosis: Dr. Hargrove pointed out the following facts which give the first case a reasonably good prognosis, i. e., (1) It was a posterior occlusion, (2) the duration and character of the pain was not long or severe, (3) the fever was not high, (4) the shock was not profound and (5) the heart was not found to be dilated. The prognosis in the second case was not considered to be good, due to: (1) aortic regurgitation, luetic in nature, and (2) evidence of involvement of the coronary ostia in the luetic process.

Discussion: Dr. Sanderson asked what factors contributed to further attacks of coronary occlusion, and Dr. Hargrove pointed out that these attacks of coronary occlusion may result from progressive involvement of the coronary artery, or that one may have, rarely, only one attack, with a fall in blood pressure, and that this lowered blood pressure, together with the arrest of the sclerotic processes in the coronaries, would mitigate against further attacks.

In answer to Dr. Blandino's question as to when it is safe to move these patients to x-ray and elsewhere, Dr. Hargrove said that the concensus of opinion is that probably the safest time is forty-eight hours after the insult, because at this time, the myocardium has not as yet reacted to the ischemia, or, in the event of infarct formation, this process will not as yet have softened.

These cases were further discussed by Drs. Youman, Mays, Cassity, and Edwards.

The next case was presented by Dr. Paul Abramson, and was that of a negro male, 30 years of age, who, during a previous admission, had undergone amputation of the fingers of both hands, as a result of gangrene. Dr. Abramson considered this case to be similar to, if not identical with, Buerger's disease. He pointed out that Buerger's disease occurs in all races, including the negro, and therefore this patient's race does not exclude that possibility. Although this case was rather sudden in onset, which is not typical of Buerger's disease, yet such an onset is, at times, observed in that disease. As to etiology, Dr. Abramson remarked that infections have been thought to be the cause, but that the great predominance of Buerger's disease in the male can be taken as evidence against such a cause. He also gave evidence that the difference in the hormones of the two sexes might be the explanation of its rare occurrence in the female. Many still hold tobacco to be a causative agent, particularly in those sensitive to this substance.

The evidence which Dr. Abramson presented in support of this case being an endarteritis obliterans was: (1) distal pulses were not perceptible either by manual palpation or oscillometric readings. Further evidence was presented in the form of very striking arteriograms, made serially after inter-arterial injection of thorium. In connection with this phase of presentation, Dr. Abramson discussed the differential diagnosis of the various peripheral vascular diseases on the basis of the arteriogram. Dr. Abramon's diagnosis in this case was progressive, disseminated, occluding arteritis of unknown etiology.

Discussion was opened by Dr. Mathews, who said the histologic examination of the pathologic specimen in this case was consistent with the diagnosis of endarteritis obliterans, but he pointed out that there are no pathognomonic, pathologic findings in the condition, and that the diagnosis can be arrived at only after taking into consideration the clinical findings, plus the pathologic evidence of infectious arteritis. He thought that this disease was similar to, or identical with, Buerger's disease.

In discussing the treatment of these conditions, Dr. Abramson said that attention should be directed towards: (1) pain and (2) the relief of gangrene. The conservative method of treatment, using the suction-pressure apparatus, has been encouraging in his hands.

The case was discussed by Drs. Winder, Oxford, Mays, and Sanderson.

The fourth case for presentation, due to the late hour, was postponed until next meeting.

There being no further business, Dr. Gowen adjourned the meeting, with the hope that future programs would be as enlightening and interesting, as was tonight's.

S. G. Wolfe, M. D., Sec.

HUTCHINSON MEMORIAL CLINIC

Symposium on Hematuria: Conducted by the Department of Urology, Dr. John G. Pratt, presiding.

Dr. Pratt—Bladder Conditions Causing Hematuria: Hematuria is one of the most important and most significant of urinary symptoms. Mackenzie reported 21.6 per cent of 3,800 urological patients had hematuria; 3.9 per cent of the general admissions to the Pennsylvania Hospital gave a history of having passed blood in the urine.

Local causes of midtract urogenital hematuria: Stone, tumors of bladder (at least 50 per cent of gross hematuria—Hinmann), ulcers, infections and diverticulum.

The symptoms of bladder calculus are: blood, pus and organisms in the urine; frequent and painful urination; straining at the end of the act; cutting off suddenly of the stream by the ball valve action of the stone. Cystoscopic examination of the bladder is the only sure method of making a diagnosis of vesical calculus, and of determining the method of approach to remove it. Small calculi may at times be grasped with cystoscopic forceps and then removed with ease; large ones may be crushed with visual lithotrite and the particles removed with a suction evacuator. Still larger stones may only be removed by suprapubic cystotomy. In those cases where there is a vesicle neck obstruction and the stone is secondary to this obstruction, it is essential that this condition be taken care of after the stone is removed.

Acute cystitis in the female may or may not be accompanied by hematuria. It may be ushered in by a macroscopic hematuria accompanying frequency of urination, burning on urination, pain and straining at the end of the act with blood throughout the urine, or only blood at the end of the act. In both the male and female it must be kept in mind that there has been blood in the urine, and upon subsidence of the symptoms from proper treatment, there must be a cystoscopic inspection made of the bladder, as there may be a condition present, such as a tumor, and the acute cystitis was superimposed upon it.

Chronic ulcerative cystitis may be a cause of hematuria. Tuberculosis of the bladder associated with renal tuberculosis may cause blood in the urine. The Hunner ulcer, or localized submucous fibrosis may be the cause of vesicle hematuria, and a differentiation of these conditions can only be made by a competent urologist who is familiar with the cystoscopic picture of these conditions.

Diverticulum of the bladder may cause a vesicle hematuria due to a diverticulitis from infection, or, more important, a tumor of the diverticulum. The treatment of a diverticulitis consists of removing the vesicle neck obstruction which is, in most cases, the cause of the diverticulum, and if it does not clear up, at a later date remove the diverticulum. Where a tumor is present in a diverticulum, it is imperative that the diverticulum be removed as soon as possible.

Injuries of the bladder, such as contusion, rupture, and penetrating wounds, cause hematuria. Due to the protection afforded the bladder by the bony pelvis, contusions and ruptures of the bladder are comparatively infrequent, but they do occur; there is always blood in the urine. A history of injury about the pelvis or a blow in the suprapubic region should always make one suspicious of an injury to the bladder. The diagnosis of rupture or penetration of the bladder is made upon the nature of the injury, more or less severe shock, and pain with inability to void accompanied by a constant desire to do so. A few drops of blood may be passed. However, an air cystogram under fluoroscopic observation is helpful. If the rupture is extraperitoneal, the air will be confined by the tissues extravesically. If intraperitoneal, it will rise to the diaphragm in the sitting position, and to the upperside in the lateral prone position. Treatment of rupture of the bladder consists of combatting shock, then immediate surgery, suprapubic cystotomy and repair of the rent in the bladder, drainage of extravasated urine from the tissues, if an extraperitoneal rupture; if intraperitoneal the peritoneum should be opened and the urine evacuated by suction.

Last but not least, and by far the greatest and most dangerous cause of bladder hematuria, are tumors of the bladder. Edwin Beers classifies primary tumors of the bladder by division of epithelial growths as follows: (A) Papillomata, benign; 2. papillomatosis. (B) Papillary carcinomata. 1. Superficial; 2. infiltrating. (C) Nonpapillary, infiltrating carcinomata, including adenocarcinomata, medullary carcinomata, squamous cell carcinomata.

These groups represent the great majority (about 95 per cent—Hinmann) of all cases presenting for diagnosis and treatment. The other 5 per cent are tumors derived from mesothelia and heterotopic tumors. The cause of bladder tumors is unknown, but it is known that workers in aniline dye factories are prone to develop papillary tumors, both benign and malignant.

The most frequent symptom of bladder tumor is painless hematuria, the urine ranging in color from a smoky pink to almost pure blood with or without clots. Should the tumor be in a position where it can be pinched or squeezed by the vesicle sphincter, there may be a terminal hematuria. Intermittent hematuria is usually the rule and the patient may pass blood for one or two urinations, or even for a day or two, and then the urine will clear up and remain clear for a variable length of time. This is rather unfortunate, as the patient or the unsuspecting clinician will think that some medication taken by mouth has cured the hemorrhage, whereas, if the bleeding had kept up, aid would have been sought to determine the cause.

The fact that the hematuria is symptomless is another bad factor, as the patient always thinks, if there is no pain, that there is no danger. The intermittency and the painless bleeding are factors which prevent the urologist from getting into action in the early stages of the growth.

All tumors do not act alike, even when they are of the same class, and the rule of early bleeding does not hold true in the growth of a tumor. Some of these growths may have as their first symptoms, frequency and pain and pus and blood in the urine. In all tumors, sooner or later, the bladder becomes infected and we have superimposed upon the symptoms of hematuria, those symptoms which are referable to the infection, i.e., frequent and painful urination. Bleeding may be so profuse in some tumor cases as to fill completely the bladder with clots and cause an acute retention. At times, if the growth is on the sphincteric margin, there may be associated with the symptoms of frequency, pain and terminal hematuria, some interference with the urinary stream. Should the growth be an infiltrating malignancy and located at or near the ureteric orifice so that it encroaches upon the lumen of the ureter, then there will be added to the picture, an intermittent hydronephrosis with pain of varying degree in the loin on the side affected.

Symptoms due to metastasis of the growth only occur very late in the course of the disease. As a rule the terminal stage of bladder growth is one of sepsis and uremia, and not due to metastasis. In all cases of hematuria, and in all cases in which there is an intractible cystitis, it is essential that a cystoscopic examination of the bladder be made. As a rule the majority of tumors of the bladder will occupy the trigone and the ureteric areas. The most frequent site of tumor of the bladder is just above and slightly lateral to the ureteric orifices. However, the entire bladder must be carefully inspected as the more malignant tumors have a habit of not respecting any portion of the bladder, and the papillary growths may seed themselves about the bladder. The cystoscopist will have to determine the nature of the growth by the picture which the growth presents. The benign papillary growth will appear like seaweed attached to the bladder mucosa by a short, slender stalk with long delicate fronds waving in the water current, and each frond having a delicate blood vessel coursing down its midportion. They are loose in appearance, but are actually attached to this slender stalk.

There is another type of papillary growth which is slightly malignant and belongs to the Broder's Type II. It has a short, fairly stout pedicle; the villi are shorter and more compact, being closely packed together, giving the growth a more meaty appearance. The third type of papillary tumor has a broad base, the villi are mere nubbings, and are densely packed together, giving the growth a raspberry appearance. As it gets older the base becomes infiltrating and the surrounding base becomes edematous. This is infiltrating papillary carcinomata of Broder's Type III. The fourth flat type of growth is non-papillary with the marked edema about the growth, and the growth itself appearing as a hard, irregular, nodular mass with necrosis about its center.

As all of these tumors become older or become infected, the picture changes and necrosis of the growth occurs. Also there are tags of adherent pus about them, and should an alkaline infection be present, the growth will become incrusted with phosphatic material, at times giving the tumor the appearance of a calculus.

In order to prove one's clinical conception of a bladder tumor at the time the cystoscopic examination is made, it is only necessary to bite off two or three portions of the growth with a pair of specimen forceps, and have them examined by a competent pathologist. It really is remarkable to see how closely a good clinical opinion of a tumor will coincide with the pathologist's report on the specimen. A method of determining the degree of malignancy of a tumor which was used before specimens were taken, was the reaction of the growth to the coagulating current. The more benign growths would melt like butter before a fire, giving off a lot of gas and gooey substance. At times there would be small explosions, audible to the operator and the patient. The more malignant the tumor was, the less was its reaction to the current; less gas and gooey substance evolved and the greater was the adherence of the electrode to the substance. In the less dense tumors, large pieces of tumor would be pulled away with the electrode.

Cystography is used quite frequently today to determine the size, the extent and the infiltration of growths. The technic of this operation is to inject 5 per cent or 6 per cent sodium iodide solution through a catheter, completely filling the bladder. This injection should be done by a low gravity flow, so as not to overdistend the bladder, and cause a spasmodic contraction of the bladder, which might lead to an erroneous reading of the plate. After the sodium iodide picture is made, all of the iodide is allowed to flow out of the bladder and the bladder is distended gently with air, using a Paguelin cautery bulb and bladder, and a second picture is made. In the iodide plate the tumor will appear as a dark filling defect; in the air cystogram it will appear as a light area against a black background.

The treatment of bladder tumors depends upon the type of tumor and its grade of malignancy. In the benign papillomas, bipolar fulguration is indi-

cated. In early, slightly malignant papillomas, fulguration will cure them. In older or more mature tumors of this type, fulguration and radon seed is the best method. In the Types III papillary carcinomas, which are superficial, radon seed and fulguration will sometimes cure them. In the infiltrating papillary carcinomas, open operation by suprapubic cystotomy combined with fulguration and radium implants is indicated. In Type IV of nonpapillary infiltrating growths, partial or total cystectomy should be done.

Dr. Edgar Burns—Renal Hematuria: The cardinal symptoms of renal tumor are hematuria, pain and tumor, usually occurring in the order named. In adults, hematuria is the initial symptom in 40 per cent, pain in 30 per cent and tumor in about 10 per cent of cases. Most all new growths of the kidney are malignant, making early diagnosis and nephrectomy before metastasis occurs necessary for cure. In practice, fulfillment of this requirement is apparently the exception, as at the present time, the average five-year cure by nephrectomy is reported to be not over 15 per cent. A diagnosis based upon the presence of the three cardinal symptoms can hardly be called an early diagnosis. Failure to make an early diagnosis is usually based upon failure properly to interpret symptoms presented and to make the necessary examination. Hematuria is always a signal of possible danger and, even if only a few hours duration, justifies whatever examination is necessary to determine its source. In children a slightly different problem is presented. Embryonal tumors are rare in adults but are almost the only ones found in children under six years of age. They encapsulate early with very little tendency to break through into the renal pelvis, and for that reason reverse the order of cardinal symptoms. Tumor and pain predominate and hematuria is relatively rare. An important point in diagnosis is that other tumors of the upper abdomen in children under six years of age are so rare that any tumor in this area can be called renal tumor with little chance of error. Kidney tumors are classified according to location into: (1) Those of the renal pelvis which, from a pathological standpoint, are almost identical with tumors of the bladder, the exception being that squamous cell types in the kidney are a little more common, and (2) those of the renal parenchyma, which at the present time, are of uncertain classification. It suffices to say that they are all malignant and cannot be differentiated clinically.

Case histories were presented representing the common types found in children and adults with lantern slides of specimens removed.

Dr. Willoughby Kittredge—Causes of Hematuria from the Prostate and Urethra: Probably the one commonest cause of hematuria from the prostate is enlargement of the gland. This may consist of either a benign hypertrophy or carcinoma. The benign hypertrophy cases bleed at least four times as often as the malignancies. There are two reasons for this: first, benign hypertrophy often consists of a middle lobe enlargement either alone or in conjunction with other lobes. These lobes are superficially placed just beneath the mucosa of the posterior urethra and often project out into the bladder through the internal spinchter. Congestion is produced by the patient's constant effort to urinate past this obstruction, leading to a markedly congested mucosa which bleeds very easily. On the other hand, malignancies are usually deep-seated. The majority originate in the posterior lobe and when they spread they usually tend to grow up behind the bladder rather than into the bladder. The bleeding produced by prostatic enlargement is usually so-called terminal hematuria. By this is meant the patient urinates a clear stream of urine, right at the very end of which appears a few drops of pure blood. The bleeding from prostatic enlargement may not be a terminal hematuria but may be an actual hemorrhage which occurs into the bladder and is not suspected by the patient until he reaches the condition of acute retention, at which time he is catheterized by a physician and his bladder found to be full of blood clots. Treatment for this emergency consists of energetic lavage of the bladder in an effort to remove all of these clots after which a catheter may or may not be left in the bladder in an effort to check further bleeding. Should lavage of the bladder be impossible or should it be impossible to introduce a catheter, the only procedure left is a suprapubic cystotomy.

Chronic posterior urethritis and chronic inflammatory disease of the prostate also lead to a terminal hematuria. The two conditions should be always considered together inasmuch as the urethra is so intimately associated with the prostate and becomes inflamed as a matter of course during every prostatic infection. Prostatitis may be acute or chronic. The reason why the posterior urethra is so apt to bleed is that there is a superficial plexus of veins just beneath the mucosa and when congestion develops, there is a grinding motion of the two surfaces of the urethra at each time that the patient finishes the act of urination. This grinding motion produces trauma which leads to hematuria. Rarer causes of hematuria from the posterior urethra are impacted stones in the prostate wall and inflammatory polypi occurring in the posterior urethra. These polypi are more frequent in women than men. In any case they lead to a terminal hematuria when present. The discharge from a gonorrheal urethritis when present in the posterior urethra is very irritating in nature due to the liberation of an endotoxin from the

disintegrated gonococci present in the discharge. This discharge originating in the posterior urethra will flow back into the bladder through the weak internal sphincter, flow out on the trigone and produce a more or less chemical cystitis limited to the trigone. This in turn adds to the dysuria present in these cases and may lead to some oozing of blood from this congested trigone. The commonest cause of hematuria from the anterior urethra is probably injury. These injuries may be classified as external or internal to the urethra itself. External injury is usually the result of blows received on the perineum and may also be due to fragments of bone puncturing the urethra after fracture of the pelvis. Internal injury of the urethra is due to instrumentation. An interesting fact about the bleeding from injury to the urethra is complete and the segments are allowed to retract, the distal segment will be so placed that no blood is able to come through it and appear at the meatus. In such cases the diagnosis of bleeding will have to be made by the presence of swelling, extravasation and ecchymosis at the site of injury. Blood, when it does appear as the result of injury to the anterior urethra is usually constantly present at the meatus between voiding. Minor injuries such as bruises will often bleed for a short period of time—twelve to twenty-four hours— and then stop. Such cases may bleed again after the eighth-day period has passed and sloughing occurs. In either case no treatment is necessary as the bleeding will usually stop after a few hours. The treatment of severe injury consists primarily in the diversion of the urinary stream above the site of injury which may be accomplished either by suprapubic cystotomy or a perineal urethotomy. Rarer causes of bleeding in the anterior urethra are chancres when they occur intra-urethrally. These are, fortunately, rare and very hard to detect when present. The same is true of intra-urethral tumors. These tumors are often mistaken for strictures in the early course of the disease as they produce obstruction to the flow of urine and resist the passage of instruments in exactly the same manner that a stricture would. They are not really diagnosed until late in the course of the disease when the disease has extended to the point where it can be noticed externally. Impacted stones in the urethra will sometimes result in hematuria particularly after some jarring injury, which causes the stone to scratch the urethral mucosa.

Dr. John G. Menville—The Non-Neoplastic Lesions of the Kidney Causing Hematuria: Hematuria may truly be designated as the outstanding danger signal in urology and its importance cannot be overstressed. The most pertinent remark I have to make tonight is that every case of hematuria should be investigated by a competent urologist.

The causes of hematuria I would like to mention are non-neoplastic lesions of the kidney, namely: Calculus; tuberculosis; non-specific infection; cysts, solitary and polycystic kidneys; echinococcus; rupture of the kidney; infarcts; aneurysm of renal artery; hemangioma and varicosities, actinomycosis; hemorrhagic Bright's disease and idiopathic hematuria.

Calculus: Keyes states that stone is not a disease but the result of several diseases. Many factors enter into its formation, the chief ones being metabolic perversions and infections with specific types of bacteria. The chief symptoms and signs are pain, pus and blood. Hematuria is not an important diagnostic sign. It is rarely severe and it may occur with or without pain. It is most frequently brief and recurrent but may occur in the form of a constant ooze for some days when there is ulceration about the stone. Moderate hematuria commonly follows pelvolithotomy but it lasts only a few days. Following nephrolithotomy Israel found bleeding in 17 per cent of the cases.

Tuberculosis: The diagnosis may be fairly simple in the hands of a competent urologist but in some cases, particularly in the early lesions, it may be difficult. The outstanding symptoms are those produced by bladder pathology which is so frequently associated with renal tuberculosis, namely frequency, nocturia, hematuria, dysuria and pain. In 403 cases of nephrectomy for renal tuberculosis at the Mayo Clinic the author found hematuria to be present in 41 per cent of the cases. The diagnosis is made by a microscopic examination of the urine including a stain for the tubercle Bacillus, by guinea pig inoculations or by a culture of the urine. The examination of the urine coupled with intravenous urography will often give all the information desired. This is particularly true in the hands of experienced urologists. However, it is frequently necessary to resort to the most accurate method of diagnosis, namely cystoscopy with retrograde pyelography. Calcification is a helpful finding. It occurs in 8-10 per cent of the cases.

Nonspecific Infections: Hematuria is not a constant or characteristic finding but it may be present. Detection of renal infections presents no difficulties if the urologist is conscious of their possible existence. Microscopic examination of the urine, cystoscopy, retrograde pyelograms or intravenous urograms will make the diagnosis.

Cysts—solitary: Five per cent of all autopsy examinations show renal cysts. Quinby and Bright recognize four types of cysts: serous which is the most common; pyelogenic which communicates with the renal pelvis; parapelvic which is probably a diverticulum of the renal pelvis, and hemorrhagic which is due to a ruptured blood vessel. Cysts of the upper pole are most likely to cause symptoms and they are due to pressure. Hema-

turia is rare. A KUB will often make the diagnosis while pyelograms will confirm it.

Polycystic Kidney: This is undoubtedly congenital. Some authorities agree that it is almost always bilateral while others state emphatically that it is always bilateral. Symptoms occur usually in early life or during middle age and when noted the signs are those of renal insufficiency associated with a mass in one or both sides. Hypertension occurs in 50 per cent of the cases. The urine shows a low specific gravity. Hematuria is present in 25-40 per cent of the cases. Colics, secondary to the passage of blood clots, may be noted. The pyelograms are typical. They present an orchid-like appearance. The life expectancy is ten years.

Echinococcus: The unruptured cyst presents a renal deformity. The symptoms are those of pressure. When rupture occurs the patient develops colics from the passage of debris and small grape-like cysts. Scolices plus hooklets are found in the urine. Roentgen ray shows cyst ring calcification of the adventitious tissue. Eosinophilia occurs in 5-40 per cent of the cases.

Rupture: Rupture is rare. Eight per cent are due to a blow on the back or flank. Hematuria following contusion of the loin is the most constant and characteristic sign of ruptured kidney and it occurs in 80-95 per cent of the cases. However, one may have hematuria without rupture of the kidney. The course of hematuria is irregular; it may flow freely for some days before diminishing or it may recur in two weeks. Excretory urography may be tried immediately unless the patient is anuric. Retrograde pyelography should not be used for one week. Surgical intervention may be necessary. Wounds of the kidney other than rupture are rare and present no special features.

Infarcts: Large infarcts are characterized by pain and hematuria. They are most frequently seen in senile arteriosclerosis of the larger arteries and in the presence of mechanical injury or distortion of the pedicles of a mobile kidney.

Aneurysm of Renal Artery: This is rare. Mathe found a preoperative diagnosis is only seven of fifty-five cases. The important diagnostic sign is a calcified ring or wreath located either just above the pelvis or in the parenchyma just outside a calyx.

Hemangiomas and Varicosities: These are exceedingly rare and a preoperative diagnosis is almost impossible. Hemangiomas give a pyelographic deformity indistinguishable from a renal neoplasm. Varicosities may give a pelvic deformity if a blood clot is present or if the varicosities are prominent.

Actinomycosis: Hematuria may occur in the late stages but it is not a characteristic finding. Pyelography will show a renal deformity and unless the fungus is found in the urine, a preoperative diagnosis is practically impossible.

Hemorrhagic Bright's Disease: These cases give a history of scarlet fever or tonsillitis. One notes pallor and puffiness of the face, about the eyes, and occasionally of the feet and hands. Fever, leukocytosis and an increased blood pressure may be noted. In the chronic active stage of the disease, hematuria is always present.

Idiopathic Hematuria: Such a diagnosis is made only after a thorough urological examination and only when all other possibilities are ruled out. The treatment is expectant. Surgical intervention should be used only when absolutely necessary. Occasionally such cases of hematuria are caused by a papillitis.

TRANSACTIONS OF ORLEANS PARISH MEDICAL SOCIETY

CALENDAR

FEBRUARY 1. Board of Directors, Orleans Parish Medical Society, 8 p. m.

FEBRUARY 1. Pathological Conference, Hotel Dieu, 8:15 p. m.

FEBRUARY 2. Eye, Ear, Nose and Throat Hospital Staff, 8 p. m.

FEBRUARY 3. Clinicopathologic Conference, Touro Infirmary, 11:15 a. m. to 12:15 p. m.

FEBRUARY 3. Mercy Hospital Staff, 8 p. m.

FEBRUARY 3. Board of Governors, 1st and 2nd District Dental Society, 8 p. m.

FEBRUARY 8. Orleans Parish Medical Society meeting dispensed with because of confliction with Carnival activities.

FEBRUARY 9. Touro Infirmary Staff, 8 p. m.

FEBRUARY 12. French Hospital Staff 8 p. m.

FEBRUARY 15. Hotel Dieu Staff, 8 p. m.

FEBRUARY 16. Charity Hospital Medical Staff, 8 p. m.

FEBRUARY 17. Clinicopathologic Conference, Touro Infirmary, 11:15 a. m. to 12:15 p. m.

FEBRUARY 17. Charity Hospital Surgical Staff, 8 p. m.

FEBRUARY 17. 1st and 2nd District Dental Society, 8 p. m.

FEBRUARY 18. Eye, Ear, Nose and Throat Club, 8 p. m.

FEBRUARY 19. I. C. R. R. Hospital Staff, 12 Noon.

FEBRUARY 22. ORLEANS PARISH MEDICAL SOCIETY, 8 p. m.

FEBRUARY 23. Baptist Hospital, 8 p. m.

FEBRUARY 24. Clinicopathologic Conference, Touro Infirmary, 11:15 a. m. to 12:15 p. m.

During the month of January the Society held its annual Installation Meeting and one regular scientific meeting.

Mr. Nicholas Bauer, Superintendent of the New Orleans Public Schools was the orator at the Installation Meeting. Dr. Frederick L. Fenno, the retiring President, read his annual report. Dr. James T. Nix gave his inaugural address. Following these talks a buffet supper was served to the members.

At the meeting of January 25, papers were read by Drs. James Wm. Tedder and Erwin Wexberg. Annual reports of the officers, and special and standing committees were read.

Final action on the following Amendment to the By-Laws was taken:

Section 3. Associate Members: Eligibility—Every dentist residing in Orleans Parish who is a member in good standing of and recommended by the First and Second District Dental Society of Louisiana; also, Medical Officers of the Army, the Navy and the Public Health Service of the United States; also teachers not physicians or those men on Fellowships in recognized medical schools or hospitals in the Parish of Orleans, restricted from any private practice.

One of the first official acts of the new administration was the issuance by the President of a letter to the membership, urging them to participate in the deliberations of the New Orleans Graduate Medical Assembly. Dr. Nix requested that all local medical men register at once for this activity. Members of the Orleans Parish Medical Society may register by forwarding a check for $10.00 payable to the New Orleans Graduate Medical Assembly, to the offices of the Orleans Parish Medical Society, upon receipt of which a registration card will be returned.

Drs. Robert A. Strong and Edward L. King conducted a series of lectures which opened the "Refresher Courses" in six principal cities in Florida. These courses will continue in the same cities for a period of six weeks, and are under the auspices of the Maternal and Child Health Division of the Florida Board of Health.

Drs. Geo. H. Hauser and Edwin H. Lawson were awarded certificates at the meeting of the American Board of Pathologists held in Baltimore on November 17, 1936, thereby becoming members of the Founders' Group of this Board. Drs. Hauser and Lawson are the only two licentiates at present in the city.

Drs. E. D. Fenner, J. T. O'Ferrall and H. Theodore Simon attended the recent meeting of the American Academy of Orthopedic Surgery, which was held in Cleveland, Ohio. Dr. Simon had a scientific exhibit at this meeting, the subject being, "A Newer Method of Teaching Fundamental Principles in Fractures," with movie reel demonstration.

Drs. Val H. Fuchs, J. Raymond Hume, Francis E. LeJeune, Mercer G. Lynch, Geo. J. Taquino, and William A. Wagner attended the meeting of the Southern Division of the American Trilogical Society, held in Memphis, Tennessee, on January 12 and 13.

Dr. C. C. Bass attended the meeting in New York of the Advisory Committee on Public Health of the Commonwealth Fund, to which he was appointed recently for a term of three years. Dr. Bass, while in the east, also attended the meeting of the American Association for the Advancement of Science, which was held in Atlantic City during the last week of December.

Dr. Ernest Carroll Faust attended the meetings of the American Association for the Advancement of Science and affiliated societies. He was installed as President of the Academy Conference, one of the councilor groups of the Association.

Dr. J. Raymond Hume was a guest speaker at the convention of the Texas Eye, Ear, Nose and Throat Society, held recently in Fort Worth.

Dr. Urban Maes was one of three out-of-state speakers who conducted a two-day course of postgraduate instruction at the University of Arkansas Medical School, Little Rock, on January 13 and 14. Dr. W. C. Alvarez, of the Mayo Clinic and Dr. Curtis Rossner, Professor of Proctology at Baylor University, were the other guests.

Dr. James E. Bailey addressed and led a discussion on "Infectious Diseases of Children" at a meeting on January 12, of the Parent-Teachers Association of the McDonogh No. 9 School.

Dr. J. M. Batchelor spoke before the recent meeting of the Civic Department of the New Orlans Federation of Clubs.

Dr. Wm. A. Wagner lectured recently before a meeting of members of the Alpha Chapter of Theta Beta, national honorary biological society, at Loyola University, on his illustrated color film of a new sinus operation method.

Dr. George J. Taquino has been appointed Professor and Head of the Department of Oto-rhino-

laryngology, in the Undergraduate School of the Louisiana State University Medical Center, to succeed the late Dr. Homer Dupuy. Dr. Taquino has been Professor of Clinical Oto-rhino-laryngology since the establishment of the Louisiana State University Medical Center here in 1931.

Dr. Walter Joseph Otis has been appointed Physician-in-Chief of DePaul Sanitarium. He succeeds Dr. H. Randolph Unsworth, who resigned recently. Dr. Otis is Assistant Professor of Clinical Neurology and of Clinical Psychiatry of the Graduate Medical School of Tulane University, and is also connected with the neurological staffs of Mercy and Charity Hospitals, and Hotel Dieu.

Dr. Donovan C. Browne addressed the Tri-County Medical Society at their meeting held in Lake Providence, January 5, 1937.

Dr. James K. Howles was a speaker at the meeting of the Issaquena-Sharkey-Warren Counties Medical Society at Vicksburg, Mississippi, on January 12, 1937, his subject being "Precancerous Dermatoses."

NEW MEMBERS

Drs. Edith Eskrigge, Murrel H. Kaplan, Luke Marcello and Reginal D. Shamblin.

TREASURER'S REPORT

Actual book balance: Nov. 30, 1936	$1,769.70
December Credits	$1,264.69
Total credits	$3,034.39
December expenditures	$1,249.96
Actual book balance: Dec. 31, 1936	$1,784.43

During the month of December, 60 volumes were added to the Library. Of these, 11 were received by gift, 19 from the New Orleans Medical and Surgical Journal, 6 by purchase and 24 by binding. Notation of new titles of recent date is given below:

The Library has loaned to doctors 641 books and journals during December, or more than 1¼ to each active member of the Society. In addition, 657 items have been loaned to students making a total of 1298. These figures do not include the great use of books and journals within the Reading Rooms.

On request of physicians, members of the staff have collected material on the following subjects during the month:

Galactose tolerance.
Renal arteriography.
Life of S. M. D. Clark.
Tumors of cecum.
Lymphatic leukemia.
Eanti's disease.
Amputation.
Artificial vagina.
Ocular headache.
Charcot joint.
History and anecdotes of anesthesia.
Roentgenologic diagnosis of syringomyelia.
Personal bibliography of E. L. King.

NEW BOOKS—December, 1936.

A. M. A.—Proceedings of the House of Delegates. 1936.

Mattice, M. J.—Chemical Procedures for Clinical Laboratories. 1936.

Cole, W. H. & Elman, Robert—Textbook of General Surgery. 1936.

Balme, Harold—Relief of Pain. 1936.

Rothermell, Fred—To Raise These Halt. 1936.

Berens, Conrad, ed.—Eye and Its Diseases. 1936.

MacCallan, A. F.—Trachoma. 1936.

Balyeat, R. M.—Allergic Diseases, their Diagnosis and Treatment. 1936.

Ohler, W. R.—Truth about Bright's Disease. 1936.

Eckstein, Gustav—Canary, the History of a Family. 1936.

Sheldon, Wilfrid—Diseases of Infancy and Childhood. 1936.

Orr, J. B.—Food, Health and Income. 1936.

Blum, Sanford—Applied Dietetics. 1936.

Muller, E. A.—Modern Treatment and Formulary. 1936.

Grollman, Arthur—The Adrenals. 1936.

Brown, Percy—American Martyrs to Science through the Roentgen Rays. 1936.

Todd, J. C. & Sanford, A. H.—Clinical Diagnosis by Laboratory Methods. 1936.

Peter, L. C.—Extra-ocular Muscles. 1936.

Delafield, Francis, & Prudden, T. M.—Textbook of Pathology. 1936.

Gilbert C. Anderson, M. D.,
Secretary.

LOUISIANA STATE MEDICAL SOCIETY NEWS

THE NEW ORLEANS GRADUATE MEDICAL ASSEMBLY

March 8-11, 1937

EIGHTEEN GUEST SPEAKERS

Medical Knowledge from North, South, East and West

Wm. W. Babcock, M. D.,
of Philadelphia, Pa.
Professor of Surgery and Clinical Surgery, Temple University School of Medicine.

R. L. Cecil, M. D.,
of New York City.
Professor of Clinical Medicine, Cornell University Medical College, New York.

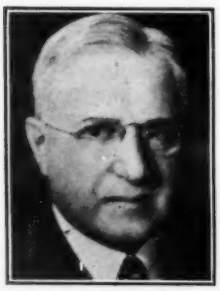
Anthony Bassler, M. D.,
of New York City.
Formerly, Professor Gastro-Enterology, New York Polyclinic Medical School and Hospital, and Medical School of Fordham University.

R. E. Dyer, M. D.,
of Washington, D. C.
National Institute of Health, Washington.

M. F. Campbell, M. D.,
of New York City.
Professor of Urology, New York Polyclinic Medical School and Clinical Professor of Urology, New York University College of Medicine.

A. C. Furstenberg, M. D.,
of Ann Arbor, Mich.
Dean of the Medical School and Professor of Otolaryngology, University of Michigan.

A. Benson Cannon, M. D.,
of New York City.
Chief of Clinic, Department of Dermatology, Vanderbilt Clinic, New York.



Julius Hess, M. D.,
of Chicago, Ill.
Professor of Pediatrics, University of Illinois, College of Medicine.

John A. Kolmer, M. D.,
of Philadelphia, Pa.
Professor of Medicine, Temple University School of Medicine.

H. J. Stander, M. D.,
of New York City.
Professor of Obstetrics and Gynecology, Cornell Medical College; Obstetrician and Gynecologist-in-Chief, New York Hospital, and Director of the Lying-In Hospital.

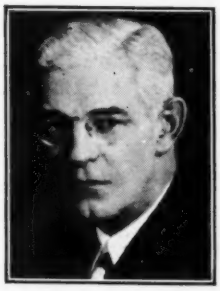
Robert B. Osgood, M. D.,
of Boston, Mass.
Professor of Orthopedic Surgery, Emeritus, Harvard University Medical School.

Hugh H. Trout, M. D.,
of Roanoke, Va.
Surgeon, Jefferson Hospital.

E. P. Pendergrass, M. D.,
of Philadelphia, Pa.
Professor of Radiology, University of Pennsylvania School of Medicine.

Clifford B. Walker, M. D.,
of Los Angeles, Calif.
Associate Clinical Professor of Ophthalmology, University of Southern California School of Medicine.

George M. Piersol, M. D.,
of Philadelphia, Pa.
Professor of Medicine of the Graduate School, University of Pennsylvania.



George Gray Ward, M. D.,
of New York City.
Professor Obstetrics and Gynecology, Cornell University Medical College.

Lewis J. Pollock, M. D.,
of Chicago, Ill.
Professor of Nervous and Mental Diseases, Northwestern University Medical School.

Ralph M. Waters, M. D.,
of Madison, Wis.
Professor of Anesthesia, University of Wisconsin Medical School.

1937 ANNUAL MEETING

The following doctors have been appointed as chairmen of the committees in charge of preparation for the 1937 Annual Meeting of the Louisiana State Medical Society, to be held in Monroe, April 26, 27 and 28.

Dr. A. L. Peters—Badges.
Dr. F. C. Bennett—Commercial Exhibits.
Dr. C. P. Gray, Sr.—Commercial Publicity.
Dr. C. P. Gray, Jr.—Entertainment.
Dr. J. B. Vaughan—Finances.
Dr. D. M. Moore—Lanterns and Sound Equipment.
Dr. R. W. O'Donnell—Locations.
Dr. Morgan Simonton—Registration and Hotels.
Dr. John Snelling—Scientific Exhibits.
Dr. F. P. Rizzo—Signs and Decorations.
Dr. W. L. Bendel—Sports.
Dr. B. M. McKoin—Transportation.

SHREVEPORT MEDICAL SOCIETY

The regular meeting of the Shreveport Medical Society was called to order on January 5, 1937 by Dr. Rutledge with 45 members and one guest present. The minutes of the previous meeting were read and adopted. The Chair was then turned over to the newly elected President, Dr. Heidorn, who, in a few remarks, outlined his ideas concerning the conduct of the Society for the coming year. Following brief reports of the Secretary and Treasurer, attention was turned to the Scientific Program.

Dr. W. M. Scott presented an interesting paper on "Essential Hypertension," pointing out its frequency, that if recognized early these individuals can be aided, that it affects individuals during their productive years, and apparently is increasing in frequency. His paper was liberally discussed by Drs. Lloyd, Blandino, Knighton, Jr., Herold, Rutledge and Knighton, Sr.

Unfinished Business: The Committee on the application of Dr. Geza Aczel reported favorably. The rules were suspended and Dr. Aczel was elected by open ballot, the oath being administered by the President.

New Business: Application for membership in the Society of Dr. R. R. Wilson was received, found in proper order and the Society ordered that it take the regular course. The following resolution was introduced by Dr. Caldwell: "The Shreveport Medical Society agrees that, if it is the wish of the Fourth District Medical Society, there can be four, rather than two combine meetings during the year." This motion was seconded by Dr. Hargrove. Dr. Herold introduced the following substitute: "That it is the sense of the Shreveport Medical Society that we have, as in the past, two meetings jointly with the Fourth District Medical Society and that two meetings be held during the year elsewhere in the District." This was seconded by Dr. Pirkle. The substitute motion carried.

Announcements: The newly appointed standing committees were announced by the President.

Paul D. Abramson, M. D., Sec.

ST. TAMMANY PARISH MEDICAL SOCIETY

At a meeting held January 8, 1937 at the Southern Hotel in Covington, the following officers were installed for the year 1937:

President, Dr. W. L. Stevenson; Vice-president, Dr. R. B. Paine; Secretary-Treasurer, Dr. H. D. Bulloch.

Business was dispensed with and refreshments were served to the members of the Society and their guests. The Society was honored in having present at the meeting, Dr. W. H. Kostmayer and Dr. P. T. Talbot, respectively President and Secretary-Treasurer of the State Society, Dr. Rhett McMahon, Councilor of the Sixth District, Dr.. Leon Menville, noted radiologist of New Orleans, and Mr. H. K. Goodwyn, Editor of the St. Tammany Farmer.

The next meeting of the Society will be held in Mandeville.

H. D. Bulloch, M. D., Sec.-Treas.

ST. TAMMANY PARISH MEDICAL SOCIETY OFFICERS, 1937

President—Dr. W. L. Stevenson, Covington.
Vice-President—Dr. R. B. Paine, Mandeville.
Secretary-Treasurer—Dr. H. D. Eulloch, Covington.
Delegate—Dr. Carl Young, Covington.
Alternate—Dr. H. E. Gautreaux, Covington.

ACADIA PARISH MEDICAL SOCIETY OFFICERS, 1937

President—Dr. H. L. Gardiner, Crowley.
Vice-President—Dr. A. B. Cross, Crowley.
Secretary-Treasurer—Dr. J. W. Faulk, Crowley.
Delegate—Dr. H. L. Gardiner, Crowley.
Alternate—Dr. A. B. Cross, Crowley.

RED RIVER PARISH MEDICAL SOCIETY OFFICERS, 1937

President—Dr. E. A. Carlisle, East Point.
Vice-President—Dr. W. L. Davis, Coushatta.
Secretary-Treasurer—Dr. W. W. Gahagan, Coushatta.
Delegate—Dr. L. S. Huckabay, Harmon.

LAFOURCHE PARISH MEDICAL SOCIETY OFFICERS, 1937

President—Dr. I. J. Boulet, Larose.
Vice-President—Dr. Leo Kerne, Thibodaux.
Secretary-Treasurer—Dr. P. J. Dansereau, Thibodaux.

Delegate—Dr. C. J. Barker, Thibodaux.
Alternate—Dr. Guy Jones, Lockport.

OUACHITA PARISH MEDICAL SOCIETY OFFICERS, 1937

President—Dr. C. U. Johnson, Monroe.
Vice-President—Dr. J. P. Brown, Monroe.
Secretary-Treasurer—Dr. R. M. Simonton, Monroe.
Delegates—Dr. G. W. Wright, Monroe, Dr. A. L. Peters, Monroe, and Dr. I. J. Wolff, Monroe.

JEFFERSON DAVIS PARISH MEDICAL SOCIETY OFFICERS, 1937

The following officers were re-elected for the year 1937:

President—Dr. Morgan Smith, Jennings.
Vice-President—Dr. John G. McClure, Welsh.
Secretary-Treasurer—Dr. L. E. Shirley, Jennings.

EIGHTH DISTRICT MEDICAL SOCIETY

The Eighth District Medical Society, at a recent meeting, elected the following officers for the ensuing year:

Dr. S. L. Calhoun, Alexandria—President.
Dr. A. B. Cairns, Bunkie—First Vice-President.
Dr. D. C. McBride, Alexandria—Second Vice-President.
Dr. J. A. White, Jr., Alexandria—Secretary-Treasurer.
Dr. W. F. Couvillion, Marksville—Delegate.
Dr. B. H. Texada, Alexandria—Alternate.

The Society adopted a resolution placing the organization on record as desiring to cooperate with the Board of Directors of the New Orleans Charity Hospital in an effort to minimize the admission of indigent patients to the hospital. The resolution favored barring as many patients from the hospital as possible until the new building is completed, as well as preventing hospital abuses which it was declared are so largely practiced at the present time by the lay people and which may continue, even after the hospital facilities are increased. The resolution was introduced by Dr. Sam J. Couvillion of Moreauville and was unanimously adopted by the Society.

The scientific program included the following papers: "Obstetrical Analgesia", by Dr. Peter Graffagnino, "Fracture of the Upper Extremity", by Dr. H. Theodore Simon and "Uses of the Electrocardiogram", by Dr. Richard Ashman.

James A. White, Jr., M. D., Sec.

SOUTHEASTERN SURGICAL CONGRESS

The Southeastern Surgical Congress announces the Eighth Annual Assembly of the Congress to be held in Louisville, March 8, 9 and 10, 1937, with headquarters at the Brown Hotel. This Assembly will in all probability be the most outstanding surgical meeting ever held in the South.

Thirty-seven of the country's most outstanding surgeons, representing each branch of surgery, have already been placed on the program and two more are to be heard from. There will be three full days of intense postgraduate lectures and one public meeting at which time the C. Jeff Miller Lectureship will be given. This lectureship will be the high point of the Assembly. Its purpose is to honor the late Doctor C. Jeff Miller of New Orleans. It was founded to commemorate the memory of Doctor Miller as a great surgeon and public benefactor. This Memorial Lectureship will bring together in one evening such men as Doctor W. D. Haggard, who is one of the world's greatest surgical orators and who will present the Memorial Address, Dr. Frederic A. Besley, President of the American College of Surgeons, Dr. Charles Gordon Heyd, President of the American Medical Association, Dr. J. H. J. Upham, President-elect of the American Medical Association, Dr. Frank Boland, President of the Southern Medical Association, Doctor Fred Rankin, President-elect of the Southeastern Surgical Congress and President of the Southern Surgical Association. These surgeons will all give talks on this occasion.

Programs will be mailed out about February 15. For information, write or wire Doctor B. T. Beasley, Secretary-Treasurer, 701 Hurt Building, Atlanta, Ga.

NEWS ITEMS

Members of the faculty of the Graduate School of Medicine attending the meeting of the American Laryngological, Rhinological and Otological Society held at Memphis, Tenn., January 12 and 13: Prof. J. Raymond Hume, Prof. F. E. LeJeune and Prof. Wm. A. Wagner.

Prof. O. W. Bethea of the faculty of the Graduate School of Medicine, Tulane University, addressed the Homochitto Valley Medical Society at Natchez, Mississippi, on "Pulmonary Abscess".

Dr. Lucien W. Alexander of New Orleans, has been appointed colonel on the staff of Governor Leche.

Dr. H. W. Kostmayer, President of the Louisiana State Medical Society, Dr. P. T. Talbot, Secretary-Treasurer, Dr. John A. Lanford, Chairman of the Committee on Cancer, and Dr. John G. Menville, attended a meeting of the Seventh District Medical Society in Welsh, Louisiana, January 21, 1937.

There is an excellent opening in Kentucky for a young man interested in internal medicine. The

data concerning this position may be obtained in the office of the Journal.

Dr. W. J. Otis announces the rearrangement of his office hours to be from 3:30 to 5 p. m. daily, Saturday and Sunday excepted, and by appointment.

A NEW POSITION

The many friends of Dr. George T. Taquino will be delighted to know that this affable and able gentleman has been appointed Professor of Otolaryngology in the Louisiana State University Medical Center.

AMERICAN COLLEGE OF SURGEONS

The sectional meeting of the American College of Surgeons to be held in Atlanta, February 3-5, 1937, at the Atlanta Biltmore Hotel will have a most interesting program which is on file in the office of the Journal. In addition to round-table conferences, clinics and so on, an excellent group of speakers on scientific subjects will appear on the program of this meeting.

AMERICAN PUBLIC HEALTH ASSOCIATION

The next meeting of this organization, the sixty-sixth annual meeting, will be held in New York, October 5-8, 1937. The officers of the Association note that in the 1936 meeting in New Orleans, there were 1650 registrants, representing 45 states and 12 foreign countries. This is a remarkable attendance.

For the first time, the National Organization for Public Health Nursing meets with the American Public Health Association together with the following other related societies:

The American Association of School Physicians.
Internation Society of Medical Health Officers.
Conference of State Sanitary Engineers.
Conference of State Laboratory Directors.
Association of Women in Public Health.
Delta Omega.

FIFTH INTERNATIONAL CONGRESS OF HOSPITALS

At the Congress in Rome, May, 1935, the International Hospital Association decided to hold the 1937 sessions in Paris. Previous sessions had been held in Atlantic City, Vienna and Knocke Sur Mer, Belgium. The meetings will occur during the International Exposition which will group the exhibits and products of more than fifty countries under the general caption, Art and Technology.

Dr. Malcolm T. MacEachern of the American College of Surgeons is vice-president of the International Hospital Association. The meetings will be held at Paris from July 6-11, 1937, and will include visits to some of the large hospitals, the Cancer Institute, and the principle agencies engaged in Public Health Work.

Persons attending the Congress will be granted important reductions in rates when traveling on French and foreign railroads. The Exposition authorities also will give special privileges to visitors.

Full information may be obtained from M. Chenevier, No. 3 Avenue Victoria, Paris IV, France.

FIRST INTERNATIONAL CONFERENCE ON FEVER THERAPY

The First International Conference on Fever Therapy will hold its sessions on March 29-31, 1937, at the College of Physicians and Surgeons, Columbia University, New York City. The first day will be devoted to the discussion of physiology, pathology, and methods of production of fever.

The second day is to be spent in the consideration of miscellaneous diseases treated by fever, such as chorea, rheumatic carditis, ocular diseases, arthritis, leprosy, meningococcus infections, undulant fever, tuberculosis, tumors and skin diseases.

The morning of the third day is to be devoted to the consideration of syphilis.

Ministries of Health from many countries have indicated their intention to send official representatives to the Conference. Those desiring to participate are requested to communicate with the Chairman of the Section in which they are interested. The manuscripts of all papers must be submitted to the appropriate chairman before February 1, 1937. Selection for the program will be made by February 15.

All who plan to attend the Conference are urged to register promptly with the General Secretary, Dr. William Bierman, 471 Park Avenue, New York City. The registration fee is $15.00.

HEALTH OF NEW ORLEANS

The Department of Commerce, Bureau of Census reports that for the week ending December 12, there were 160 deaths in the city of New Orleans, divided 106 white and 54 negro, giving a death rate of 17.4. The infant mortality was surprisingly low at a rate of 52. For the next week ending December 19, there was a very considerable increase in the total number of deaths; 188 experienced in New Orleans and divided 121 white and 67 negro. The death rate for the total group was 20.4. For the two divisions, white and negro, apparently the rates are no longer to be published. The infant mortality rate for this week was 93. For the last week in the year, which came to a close December 26, the total deaths were almost equal to those of the week previous, being 187, of which 108 were white and

79 negro. The death rate was 20.3 and the infant mortality was 93. For the 52 weeks of the year, the death rate in the city has been 18.3 as contrasted with a rate of 16.4 in 1935. Looking down the death rates in other cities, it is apparent that the year 1936 very widely has been a year of high mortality, as practically every city reporting has a higher rate for 1936 than it had for 1935. Incidentally, for the 52 weeks of the year, the death rate in New Orleans was exceeded only by that of the city of Nashville and equalled by that of the city of Washington, D. C. The week ending January 2, 1937, finds somewhat more cheerful figures, as only 151 deaths took place in the city, 87 white and 64 negro. The death rate was 16.4 as compared to a rate of over 20 for the two previous weeks. For the week ending January 9, 146 deaths are listed, divided 89 white and 57 negro. The number of deaths under one year was 11.

INFECTIOUS DISEASES IN LOUISIANA

Dr. J. A. O'Hara, Epidemiologist for the State of Louisiana, has furnished us with the weekly morbidity reports for the State of Louisiana, which contain the following summarized information: For the week ending December 19, the following diseases were reported in double figures: 49 cases of pneumonia, 37 each of syphilis and gonorrhea, 34 of pulmonary tuberculosis, 22 of cancer, 16 of scarlet fever, 13 each of malaria and diphtheria, 12 of influenza and 11 of chicken pox. Of the more unusual diseases, there was reported a case of poliomyelitis from Acadia, a case of tularemia from Rapides and undulant fever from both Caddo and East Carroll Parishes. For the last week of the year, pneumonia again led all other reportable diseases with 50 cases listed. This was followed by 36 cases of syphilis, 31 of pulmonary tuberculosis, 25 of cancer, 21 of gonorrhea, 13 of diphtheria and 12 of scarlet fever. The poliomyelitis case reported this week came from Rapides Parish, while a patient with typhus fever was discovered in Caddo and meningococcus meningitis originated in Orleans. Pneumonia still held sway as the leading reportable disease in the week ending January 2, 1937. Succeeding, in order of frequency, were 42 cases of cancer, 31 of pulmonary tuberculosis, 23 of influenza, 19 of syphilis, 15 of diphtheria, 14 each of scarlet fever and measles, 12 each of malaria and gonorrhea, and 11 of typhoid fever. Six of the reported cases of typhoid fever came from St. James Parish, no other parish reported more than one case. This week 3 patients with tularemia were found, one each in Morehouse, Orleans and West Carroll Parishes. A case of lethargica encephalitis was listed from Orleans Parish. For the week ending January 9, for some peculiar and unusual reason, the cases of pulmonary tuberculosis, 80 in number and almost triple the five year average, led the reportable diseases. It was followed closely by syphilis with 75 instances, and then came gonorrhea with 48 cases and influenza with 47 cases. There were also reported 53 cases of pneumonia, 26 of whooping cough, 29 of scarlet fever, 20 of cancer, 13 of diphtheria, 11 of typhoid fever and 10 of chicken pox. Another case of poliomyelitis was reported to the Bureau of Epidemiology, this time from Richland Parish. Webster Parish had the unique experience of reporting a case of small pox, the first that has appeared on the records for many weeks. Of the typhoid fever cases, not more than 3 were reported from any one parish. Although it has been said that influenza is rife, only comparatively few cases were reported, many less than the usual number reported at this time in a five year average. Reported cases of pneumonia were approximately the same as the five year average, while there has been a distinct slump in the cases of diphtheria, the five year average being 31.6, whereas only 13 cases were listed.

WOMAN'S AUXILIARY

Louisiana State Medical Society

President, Mrs. James Byron Vaughan, Monroe.

President-Elect, Mrs. George D. Feldner, New Orleans.

First Vice-President, Mrs. F. G. Ellis, Shreveport.

Second Vice-President, Mrs. T. H. Watkins, Lake Charles.

Third Vice-President, Mrs. E. B. Middleton, Homer.

Fourth Vice-President, Mrs. R. R. Arceneaux, Welsh.

Recording Secretary, Mrs. C. Grenes Cole, New Orleans.

Corresponding Secretary, Mrs. Joseph P. Brown, Monroe.

Treasurer, Mrs. Courtland P. Gray, Monroe.

Parliamentarian, Mrs. R. T. Lucas, Shreveport.

JEFFERSON DAVIS PARISH

The Woman's Auxiliary to the Jefferson Davis Parish Medical Society held their January meeting in Crowley at the home of Mrs. J. W. Faulk. A brief business session was conducted by the president, Mrs. G. W. Remage.

An interesting discussion on the legislation of health insurance was led by Mrs. L. E. Shirley. Mrs. Shirley is a gifted reader and concluded the program with a reading "In the Royal Garden," which afforded delightful entertainment to the members.

Mrs. Claude A. Martin,
Publicity Chairman.

ORLEANS PARISH

The Woman's Auxiliary to the Orleans Parish

Medical Society enjoyed its regular meeting and reception at the Orleans Club on January 13.

We were fortunate in having with us Dr. Urban Maes who gave an instructive discussion of appendicitis. This was a splendid introduction to our periodic health examination campaign which is being encouraged among our members. We all realize the importance of a yearly physical examination and should never neglect anything so important.

During the afternoon, a social hour was enjoyed over tea and sandwiches. We shall enjoy the pleasure of entertaining our mothers at the next meeting. This is a privilege to which we look forward each year.

Mrs. Edgar Burns,
Publicity Chairman.

A MESSAGE TO ALL AUXILIARY MEMBERS

Following is an excerpt from a letter received from the National Chairman of Press and Publicity. This is of primary importance to all of us, and I do hope that the parish publicity chairmen will be able to get more news in to me so that I, in turn, may forward it to Mrs. Simonds:

"The National Auxiliary will be given space each week in the Journal of the American Medical Association, in the section devoted to the New Bulletin. The Board of Trustees and the officials of the Association have extended this courtesy to the Auxiliary because of the increasing usefulness of its service to the medical profession.

"As Chairman of the Press and Publicity Committee of the National Auxiliary, it will be my duty each week to send to Dr. Morris Fishbein, the Editor of the Journal, news items from National, State and County Auxiliaries. Dr. Fishbein will edit this Auxiliary news and will publish whatever is of National Auxiliary interest or value.

"The only sources which I have for obtaining State and County Auxiliary news are the reports which I receive from the State Press and Publicity Chairmen and the Auxiliary news which is published in State Medical Journals. The amount of publicity which any State Auxiliary receives in the Journal will depend entirely upon the amount of news which I obtain from these sources.

"The Journal of the American Medical Association has a weekly circulation of approximately 100,000 copies."

After reading the foregoing, it is quite easy to realize the importance of publicizing Auxiliary with a nucleus as is afforded by the Journal's circulation. I trust each publicity chairman will do her utmost to gather all the material possible for this space in the Bulletin.

Mrs. George D. Feldner,
Chairman Press and Publicity.

BOOK REVIEWS

Physical Signs in Clinical Surgery: By Hamilton Bailey, F. R. C. S. (Eng.) 5th ed. rev. Baltimore, Wm. Wood & Co. 1935. pp. 287. Price $6.50.

This little volume has been edited five times since 1927 with two additional second impressions. This, in itself, speaks for the value as well as the popularity of the text.

As the title indicates, this book contains a description of physical signs in clinical surgery together with the detailed technic for demonstrating them. The subject matter is arranged so that those signs which are found in the same anatomical region are grouped together and form separate chapters, such as chapter IV, "The Neck," and chapter VII, "The Face and Jaws." The exacting detail and lucid description, so characteristic of English books, is everywhere manifested.

But few surgical texts contain an adequate description of most of the signs presented, and this little book should bear the same relationship to the study of surgery as does Cabot's Physical Diagnosis to the study of medicine. It should be in the possession of every beginning student of surgery. It can be recommended without qualification.

E. Perry Thomas, M. D.

The Art of Treatment: By William R. Houston, A. M., M. D., F. A. C. P., New York, The Macmillan Company. 1936. pp. 725. Price $5.00.

Dr. William R. Houston, with a new approach to theraupeutic thinking, brings you to the bedside of the patient instead of to the hospital amphitheatre, thereby bringing the practicing physican to a more intimate relationship with his patient. He treats diseased individuals rather than diseases, in fact, the labeling of the disease is relatively unimportant in comparison to the successful management of the case.

Although ample attention is given to the more concrete phases of treatment, the importance of psychotherapy is fully realized. In fact, this is the keynote of the book. Psychotherapy is set forth in a material way, with none of the quasi-medical methods of presentation usually used. There may be some criticism of the amount of the subject matter given over to this field, but when one considers that every pathological condi-

tion presents a psychological phase it can be seen that this is not overemphasized.

The subdivision on patients who are to be treated chiefly by nursing care is a very good example of the book's theraupeutic approach. In this chapter, using typhoid fever as a working base, Dr. Houston finds an opportunity to demonstrate a theraupeutic armamentarium which can well be used in a great number of the common disorders of mankind. Some of the other chapter headings are The Specific Diseases Which Impose a Limitation Upon Life as a Condition of Treatment, Disorders in which Physiological Considerations Guide Treatment, and Conditions in which Treatment is Tentative and Experimental.

This book is to be recommended both to medical students and to the practicing physician. However, its chief usefulness will come to the practicing physician who is able to bring into actual use a great many of the ideas presented, something that the student with his limited material is unable to do. The style is discursive and thoroughly readable.

C. P. Cabibi, M. D.

Pharmacopoeia of the U S. of America: By the authority of the U. S. Pharmcopoeial Convention. 11th decennial revision. Easton, Pa., Mack Printing Co. pp. 676. Price $5.00.

The eleventh revised edition of the United States Pharmacopoeia became official on June 1, 1936. This standard has changed much in the 116 years of its existence and more than any other single work reflects the progress of the science of medicine.

The present volume is the product of a revision committee of fifty, including seventeen physicians and thirty-three members of the allied sciences assisted by a large group of collaborators who have given unstintingly of their time and effort. It represents five years of preparatory work by the previous committee of fifty, and five years of intensive labor by the present committee.

Naturally many changes are found in this edition. Fifty-eight new titles are included and 115 old ones have been omitted. Of this latter group those worthwhile have been added to the new National Formulary.

We find admitted to standardization such useful products as preparations of liver, ephedrine and theophylline, iodized oil, chiniofon, tryparsamide, and a number of vaccines and serums which are of approved value.

Few alterations have been made in the names of the preparations retained, and no material changes appear in the strength of the galenicals.

The various tables have been brought up to date and the color descriptions have been largely revised.

It is apparent that the effort has been made to render the Pharmacopoeia an even more useful book for the physician and the present program for popularization that has been worked out with the Journal of the American Medical Association should result in this attractive volume being on the desk of every disciple of the healing art.

O. W. Bethea, M. D.

Clinical Diagnosis by Laboratory Methods: By James Campbell Todd, Ph. B., M.D., and Arthur Hawley Sanford, A.M., M.D. 8th edition rev., Philadelphia, W. B. Saunders & Co., 1936 pp. 792. Price $6.00.

The eighth edition of this well-known book has been revised and edited by Dr. Sanford, the senior author since the death of James C. Todd.

Clinical Diagnosis by Laboratory Methods, although intended to be a text-book, has grown to be more fitted for the clinical pathologist or technician; the wealth of material and the broad scope of the book certainly make it a treatise rather than a text-book.

The new material has been scattered throughout the book and twenty-five new illustrations are to be found in this edition.

As in the previous editions the colored plates showing different types of blood cells stained with Wright's stain do not convey the actual characteristic colors usually found.

For anyone desiring to possess a complete, simple and authoritative book on clinical pathology, Todd and Sanford's "Clinical Diagnosis by Laboratory Methods" is recommended.

Alberto Prieto, M. D.

Extra Ocular Muscles: By L. E. Peters, A. M., M. D., Sc.D 2d ed. rev. Philadelphia, Lea & Febiger, 1936. pp. 351. Price $4.50.

It is nine years since I previewed the first edition. It has remained one of outstanding merit in its field. Ophthalmology welcomes the second edition. It contains many advances in orthoptic and surgical treatment.

Has the author devoted sufficient space and enthusiasm to orthoptic treatment? Popular interest seems to justify more. His conservatism, in my opinion, is commendable. The trend of today is apparently toward the use of psycho-therapy concealed in gadget form of many kinds. One is orthoptic training equipment.

The very excellent table of contents and thorough index are excellent. So are the illustrations which are numerous and reasonably well selected.

Has the author stressed sufficiently the importance of functional disorders in the symptomatology and treatment of heterophoria? Like ancesters, we all have a little.

In conclusion, here's congratulations on the second edition. May it continue a classic.

CHAS. A. BAHN, M. D.

Food, Health and Income: Report on a Survey of Adequacy of Diet in Relation to Income; By John Boyd Orr. London, Macmillan and Co., Ltd., 1936. pp. 72. Price $1.00.

It is universally recognized that individuals who are prevented from obtaining a proper diet are thereby deprived of realizing their anticipated growths in physical proportions. Orr has studied all available data in the United Kingdom in an effort to find substantiation of this common belief.

In the course of his survey, he decided not to discuss minimum standards because these are too contraversial but to adhere to the optimum requirements based on the physiological ideal, such that no improvement could be effected by any change in diet. He divided the population into six groups according to their incomes and took as his basis for comparison of good health, the physical states of those whose economic resurces permitted them to choose food freely without regard to cost.

The results of his survey corroborated the prevalent thought. In almost direct linear relationship, the number and the extent of physical disorders attributable to faulty or inadequate diet decrease as the income of the group increases. According to his standards, about 50 percent of the population of the United Kingdom is existing on an income which does not permit of proper selection of foods. There is enough evidence adduced to show that the great majority of these physical defects can be corrected by affording proper diets to these people.

The work is brief (72 pages), interestingly written, and replete with charts, diagrams and figures which show rather convincingly that the economic and political aspects of malnutrition cannot be considered as things apart from the medical problems. The publishers' phrase "A Challenge to the Nation to Improve the Health of the Rising Generation" is aptly chosen.

This work is recommended to anyone interested in studying problems related to nutrition.

SYDNEY JACOBS, M. D.

Recent Advances in Radiology: By Peter Kerley, M. D., B.Ch. (N. U. I.), D. M. R. E. (Camb.), 2d ed. Philadelphia, P. Blakiston's Son & Co., Inc., 1936. pp 322. Price $5.00.

The celebrated English radiologist wrote this book with the intention of helping the general practitioner to appreciate the value of x-rays, and therefore he has included in this single volume all practical applications of diagnostic radiology. The recognition and explanation of existing pathology in terms of its roentgen shadows have been skillfully accomplished.

This second edition has been the result of the many advances in the science of radiology since the first edition was written. Extensive additions and alterations have been made in the chapter on bone diseases. The chaper on the lungs also has been considerably enlarged and the chapters on the heart and the biliary and renal tracts have been entirely rewritten.

This work consists of ten chapters devoted to the following subjects: Injuries and Diseases of Bone; Injuries and Diseases of Joints; Deformities and Diseases of the Skull; the Heart; Diseases of the Aorta; Pulmonary Artery and Mediastinum; the Lungs; Diseases of the Pleura and Diaphragm; the Alimentary Canal; the Biliary Tract, the Genito-Urinary Tract, the Uterus. The bibliography at the end of each chapter includes outstanding articles in the European and American literature. The illustrations are numerous and are very clear. The author has included diagrams to simplify the roentgen appearance in some cases. The index is complete and this book should be valuable for medical students, and general practitioners. It should also serve as a useful quick reference for radiologists.

J. N. ANE, M. D.

Roentgen Interpretation: A Manual for Students and Practitioners: By George W. Holmes, M. D., and Howard E. Ruggles, M. D., 5th ed. Philadelphia, Lea and Febiger, 1936. pp. 356. Price $5.00.

This is the fifth edition of a well known work on roentgen interpretation. The authors have brought the subject matter up to date by the addition of such advances in diagnosis and technic, as have appeared since the previous edition was published.

This work has always been intended as a brief survey of roentgen diagnosis for practitioners and medical students. However, the organization of the subject matter and the addition of a rather complete bibliography and index should make this volume a valuable reference for the radiologist.

The first chapter dealing with confusing shadows and artefacts should aid considerably in avoiding errors in diagnosis due to the false interpretation of these shadows. The second chapter entitled "Anatomical Variations and Development" contains charts indicating the appearance and union of bone centers, and recommendations of areas to be filmed for bone-age determination, and should serve as a valuable reference in the busy roentgen laboratory. The chapters on bone pathology, the skull, and the spine present concisely and clearly the essential knowledge of these rather

difficult subjects, keeping in mind at all times the pathological anatomy responsible for the roentgen shadows. The chapters on the heart and great vessels, the lungs, the gastrointestinal tract and the genito-urinary tract contain well illustrated descriptions of the usual conditions encountered. The final chapter dealing with fluoroscopic technic contains description of equipment, suggestions for protection, and the technics of fluoroscopic examination of various portions for various purposes, and should be carefully studied by all who use the fluoroscope.

J. N. Ane, M. D.

The Riddle of Woman: By Dr. Joseph Tenenbaum, New York, Lee-Furman, Inc., 1936. pp. 477. Price $3.50.

The Riddle of Woman presents a composite picture of the female in various environments and phases of existence. Fortunately, the reader is not subjected to a series of flowery and ambiguous dissertations on "Mysterious Woman," but rather a logical and pleasant survey which tends to rationalize rather than patronize woman's reaction to life.

The chapters on Sex Psychology and Sex Urge are slightly superior; the chapter on Women in Industry inferior to the rest of the book.

Zachary J. Romeo, M. D.

Modern Urology: Edited by Hugh Cabot, M. D., LL. D., C. M. G., F. A. C. S. 3rd. ed. Philadelphia, Lea and Febiger, 1936 2v. Price $20.00.

This work, in two volumes, represents the third edition of Dr. Cabot's text; the first appearing in 1918 and the second in 1924. The present edition is some 350 pages larger than the one before it and is made up entirely of original contributions by American authors. The list of contributors has, of necessity, been altered to some extent, with the addition of many new names, and changes in other departments because of deaths.

The text has been radically revised and in many sections completely rewritten, in keeping with the advances in technic and changes in conception that have come about in the past twelve years. One entirely new section has been added, namely, radiation therapy of tumors, by Dr. Benjamin Barringer.

This work meets equally the needs of the specialist and the general practitioner. The illustrations are profuse and for the most part original. Diagnosis and treatment are stressed throughout, and the various operative procedures, as well as the fundamental principles, are included, to make the work complete in every detail.

As Dr. Cabot himself admits, all composite works have an inherent weakness in that they lack smoothness and balance of works produced by a single author. There is always some lack of unanimity and always obvious differences of opinion where two men approach the same subject from different angles.

Whereas this would be an objection to the book, were it intended solely for students, it is not, as far as the profession at large is concerned, as the work may be regarded as a correlated set of monographs, each expressing the individuality of its author. In its present form, it may be considered a comprehensive and authoritative study of the science of urology, conservative in practice, yet modern in spirit.

W. E. Kittredge, M. D.

Urological Roentgenology: Ey Miley B. Wesson, M. D. and Howard E. Ruggles, M. D. Philadelphia, Lea and Febiger, 1936. pp. 269. Illus. pl. Price $5.00.

This work covers the entire field of x-ray diagnosis in urology as completely as possible. The films used as illustrations are, to a large extent, taken from the authors' personal cases, and are supplemented by plates from perhaps a dozen other urologists. The reading matter of the text consists of concise statements on etiology, pathology and treatment, followed by a detailed analysis of the roentgenological features in the diagnosis of each disease. The legends that accompany the illustrations are more or less complete case histories.

Whereas practically all known abnormalities are described in the text, the authors were naturally unable to obtain films of every type. In fact, it is to their credit that as many as 227 illustrations are offered, and that practically all of these have been confirmed by operation or autopsy.

The avowed purpose of the book was to furnish a reference work for the general practitioner, and not the specialist, and to a large degree this policy has been followed. However, in some instances, it appears that the authors yielded to the temptation to show the more unusual and odd manifestations of pathology to the exclusion of the more typical types. These cases are indeed interesting to the specialist but are not to be expected in the general run of practice.

After studying these pictures, one is impressed with the fact that in so many instances, urography does not offer characteristic proof of circumstantial evidence, which must, in each case, be correlated with the clinical findings. That the authors share this feeling is attested by this typical statement. That the authors share his feeling is attested by this typical statement on page 172,—"There is no such thing as a typical tumor pyelogram."

The writers of this work are delightfully frank in their admission, from time to time, of the limi-

tations of x-ray diagnosis. They are careful to point out inadequacies, wherever present, particularly as regards intravenous pyelography. In addition they have included quite a number of films showing errors in preoperative diagnosis, as proven by subsequent pathological findings.

The work is certainly comprehensive in its scope and, on the whole, may be considered a reliable guide to the interpretation of urograms. Any urologist or roentgenologist will profit from a study of the plates presented.

W. E. KITTREDGE, M. D.

Keeping Your Child Normal: By Bernard Sachs, M. D. New York, Paul B. Hoeber, Inc. 1936. pp. 148. Price $1.50.

What a joy to find someone bold enough to say that sex does not dominate our lives from the minute we open our eyes, someone to divert our minds from the "infantile libido"! Imagine a psychiatrist saying that he believes in "a sense of loving obedience toward the parent and consideration for one's family and neighbors". If for no other reason than this, the book should be read by all parents and teachers.

Dr. Sachs takes up infancy and early childhood, the school age, puberty and adolescence. In all these periods of our life, he shows the parent how to handle a normal child so as to keep him normal and shows how most of the supposed abnormalities of the child exist only in the parent's mind.

The only dictum the reviewer does not agree with entirely is that environment is more important than heredity. Dr. Sachs is probably right but we are all entitled to our opinions.

SUZANNE SCHAEFER, M. D.

Textbook of General Surgery: By Warren H. Cole, M. D., F. A. C. S., and Robert Elman, M. D. New York, D. Appleton-Century Company, 1936. pp. 1031. Price $10.00.

This book is essentially a presentation, in the conventional form of a one volume text on descriptive surgery, of the most recently revised material prepared for didactic and clinical teaching of general surgery at the Washington University School of Medicine.

The authors give at least brief discussions or references to practically all of the more or less tested and presently accepted principles and practices in the general surgical field.

With but few exceptions, details of operative technic are omitted, and as indicated by the title, no attempt is made to present the surgical specialties such as oto-rhino-laryngology, ophthalmology, or other branches of surgery outside the scope of general surgery.

The book is written in a clear and simple form, is well illustrated, and is of convenient size. An excellent bibliography accompanying each chapter reflects thought and care in the selection of the recent as well as the older representative contributions referred to throughout the text.

Besides being suitable for use by medical students, the book contains much material which would be of interest to the practicing surgeon who is not as familiar as he might be with some of the more recent surgical literature and practice.

AMBROSE H. STORCK, M. D.

Canary, the History of a Family: By Gustav Eckstein, New York, Harper & Brothers, 1936. pp. 281. Price $2.50.

The author of the very popular biography of the great Noguchi has written in a most interesting and charming manner the history of a family of canaries that he observed over a period of eleven years. He displays the same searching observation in his study of the yellow bird as he did in his story of the Yellow Jack. Interestingly, he relates how he converted his laboratory into a huge cage and attempted to simulate natural environment so that they might lead a free and easy life. He found that they lead lives quite similar to those of humans. They love and hate, they work and play, they build and destroy, they hurt and heal, they lead communal lives and yet maintain certain intimate personal privileges as do individuals of the species of the homo sapiens. It is to the credit of Eckstein that he has been able to give us such a splendid commentary about these small sweet songsters.

I. L. ROBBINS, M. D.

PUBLICATIONS RECEIVED

Bruce Humphries, Inc., Boston: Carcinoma of the Female Genital Organs by M. C. Malinowsky and E. Quater, translated from the Russian by A. S. Schwartzmann, M. D.

Lea & Febiger, Philadelphia: Dietetics for the Clinician by Milton Arlanden Bridges, B. S., M. D., F. A. C. P.

Lee Furman, Inc., New York: Childless by Sam Gordon Berkow, M. D.

The Macmillan Company, New York: Dietetics Simplified by L. Jean Bogert, Ph. D., with Laboratory Section by Mame T. Porter, M. A.

The C. V. Mosby Company, St. Louis: Synopsis of Ano-Rectal Diseases by Louis J. Hirschman, M. D., F. A. C. S. Physical Therapeutic Methods in Otolaryngology by Abraham R. Hollender, M. D., F. A. C. S. The Management of Obstetric Difficulties by Paul Titus, M D.

W. B. Saunders Company, Philadelphia: Physical Diagnosis by Ralph H. Major, M. D.